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昆蟲學評論

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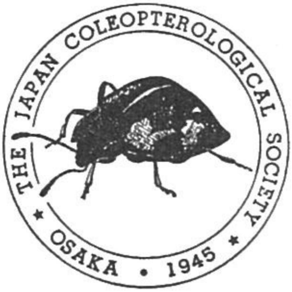

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昆 蟲 学 評 論

THE ENTOMOLOGICAL REVIEW OF JAPAN

VOL. XXXII, NOS. 1/2. DEC., 1978.

On a Collection of Carabidae from Nepal Made by the Hokkaido University Scientific Expedition to Nepal Himalaya, 1968 (II)

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The Part I of this article was published in Bull. Natl. Inst. Agric. Sci., (C) no. 27, pp. 81–132 (1973). The present paper is the second part containing the Amarini, Harpalini, Oodini and Callistini. The remaining so-called Truncatipennes-group will be published as the third part.

Tribe AMARINI

I much owe the identification of the species of *Amara* to Dr. F. HIEKE of the Humboldt University in Berlin.

47. *Amara* (*Amara*) *darjelingensis* PUTZEYS

Amara darjelingensis PUTZEYS†, 1877, Stett. Ent. Zeit., 38: 102.

1♀, V. 8, 1968, Lete, Palpa (at alt. 2440 m), T. KUMATA leg.

I compared the single female with some Indian specimens which Dr. M. J. D. BRENDELL of the British Museum kindly loaned me.

Scientific Results of Hokkaido University Expeditions to the Himalaya, Entomology no. 29.

† means indirect citation.

48. *Amara* (*Pseudobradytus*)[1] *batesi* Csiki

Bradytus compactus Bates, 1878, Proc. Zool. Soc. Lond.: 717 (nec Putzeys).
Amara (*Bradytus*) *Batesi* Csiki, 1929, Col. Cat., pars 104 : 454.

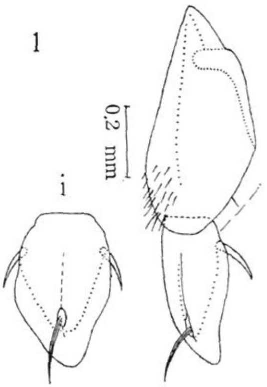


Fig. 1. Left stylus of *Amara* (*Pseudobradytus*) *batesi* Csiki. i: apical segment in inner view.

1♂, 2♀♀, V. 8, 1968, Lete, Palpa (at alt. 2440 m), T. Kumata leg.; 2♂♂, 1♀, V. 11, 1968, Gorapani Deorali, No. 4 West (at alt. 2850 m), T. Kumata leg.

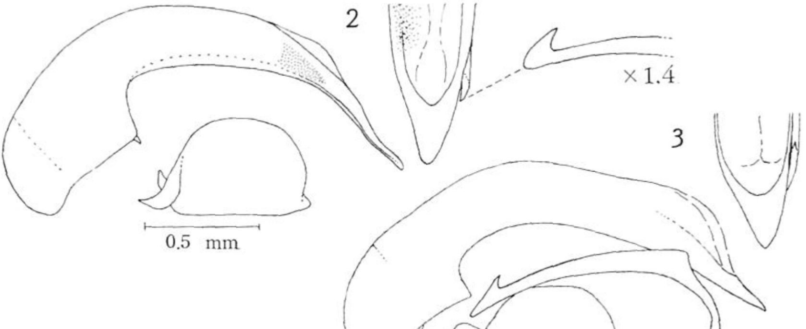
The basal segment of the styluses (Fig. 1) is one and one-half times as long as the apical segment, rather sparsely pubescent at an apical third on the dorsal half; the apical segment is a little more than one and one-half times as long as wide, the dorsal outer margin is roundly, fairly explanate at the middle, thence evenly contracted apically, and the ventral outer margin is slightly rounded near the middle, shallowly sinuate at an apical third.

49. *Amara* (*Bradytus*) *elegantula* Tschitschérine

Amara (*Liocnemis*) *elegantula* Tschitschérine, 1899, Horae Soc. Ent. Ross., 32 : 659–660.

1♂, 1♀, VI. 5, 1968, Gosainkund (at alt. 4200 m), T. Kumata leg.

I have compared those specimens with some



Figs. 2, 3. Male genitalia of *Amara* spp.
2. *A.* (*Leiocnemis*) *sikkimensis* Andrewes. 3. *A.* (*Harpaloamara*) *latithorax* Baliani.

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[1] Concerning *Pseudobradytus*, see Habu, 1978, Ent. Rev. Japan, 31:119–126.

Indian ones. TSCHITSCHÉRINE included the species in the subgenus *Liocnemis* (= *Leiocnemis*), but I place it in *Bradytus* according to Dr. F. HIEKE's suggestion.

50. *Amara* (*Leiocnemis*) *sikkimensis* ANDREWES

Amara (*Leiocnemis*) *sikkimensis* ANDREWES, 1930, Trans. Ent. Soc. Lond., 78 : 6, 24–25.

1♂, V. 2, 1968, Gorapani Deorali (at alt. 2850 m), T. KUMATA leg.; 1♀, V. 5, 1968, Lete, Palpa (at alt. 2440 m), T. MATSUMURA leg.; 1♂, VI. 8, 1968, Khurumsang, No. 1 West (at alt. 2500 m), T. MATSUMURA leg.

The two male specimens have somewhat dense or rather sparse pubescence, although ANDREWES states "without any inner fringe of hairs", on the inner side of the hind tibiae; the pubescence is said to be variable in this species according to Dr. F. HIEKE's information. The male genitalia are indicated in Fig. 2.

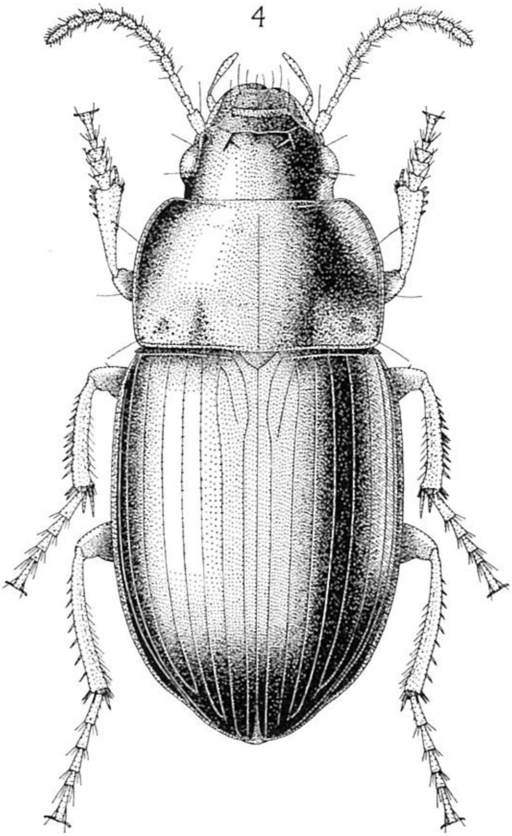

Fig. 4. *Amara* (*Harpaloamara*) *latithorax* BALIANI, ♂.

51. *Amara* (*Leiocnemis*) *aimonissabaudiae* BALIANI

Amara (*Leiocnemis*) *aimonis sabaudiae* BALIANI, 1932, Mem. Soc. Ent. Ital., 11: 11–12.

1♂, 1♀, V. 6, 1968, Tukucha, Palpa (at alt. 2600 m), T. KUMATA leg.; 3♂♂, 3♀♀, V. 7, 1968, Marpha, Palpa (at alt. 2700 m), T. MATSUMURA leg. (some are teneral).

52. *Amara* (*Leiocnemis*) *singularis* TSCHITSCHÉRINE

Amara (*Liocnemis*) *singularis* TSCHITSCHÉRINE, 1894, Horae Soc. Ent. Ross., 28: 397–399.

1♀, V. 8, 1968, Lete, Palpa (at alt. 2440 m), T. KUMATA leg.

53. *Amara* (*Harpaloamara*) *latithorax* BALIANI

Amara (*Harpaloamara*) *latithorax* BALIANI, 1933, Mem. Soc. Ent. Ital., 12 : 198–199.
1 ♂, V. 9, 1968, Rukuche Khola (at alt. 1600 m), T. KUMATA leg.
The male genitalia are shown in Fig. 3.

Tribe HARPALINI

54. *Amblystomus similis* LANDIN ?

Amblystomus similis LANDIN, 1955, Ark. Zool. (N. S.), 8 : 405, 446, figs. 50, 64.

1 ♂, V. 12, 1968, Biratanti, No. 4 West (at alt. 1150 m), T. KUMATA leg.; 2 ♂ ♂, VI. 21, 1968, Kathmandu (at alt. 1340 m), T. KUMATA leg.

The three specimens from Nepal almost fit the description of the species from Burma; however, the elytral patch is on the second to fourth intervals in the Nepalese specimens—on the second to fifth intervals in the Burmese one—and the ventral side smooth except for a few obscure punctures on the lateral areas of the metasternum and the sternites are glabrous except for a little short fine pubescence.

55. *Chydaeus planicollis* ANDREWES

Chydaeus planicollis ANDREWES, 1931, Ann. Mag. Nat. Hist., (10) 7 : 515–516.
1 ♂, V. 1, 1968, Ulleri, No. 1 West (at alt. 2010 m), T. MATSUMURA leg.
The single specimen almost agrees with ANDREWES' description.

56. *Chydaeus obscurus* CHAUDOIR ?

Chydaeus obscurus CHAUDOIR, 1854, Bull. Soc. Nat. Mosc., 27 (2) : 344–345.
1 ♂, V. 10, 1968, Chitare, No. 4 West (at alt. 2400 m), T. MATSUMURA leg.

The basal angles of the pronotum are with a distinct tooth projecting laterally in the above specimen. They are "droit, mais dont le sommet est légèrement émoussé" in CHAUDOIR's description, while "als sehr spitze Zähne nach außen springend" in SCHAUBERGER's key (SCHAUBERGER, 1934, Ent. Anz., 14 : 69–71). I must add that according to this key the present species also falls into *C. planicollis* ANDREWES.

57. *Harpalus* (*Pseudoophonus*) *indicus* BATES

Harpalus Indicus BATES, 1891, Ann. Soc. Ent. Belg., 35 (Compt. Rend.) : CCCXXXII.

1 ♂, V. 2, 1968, Gorapani Deorari, No. 4 West (at alt. 2850 m), T. MATSUMURA leg.; 1 ♂, 1 ♀, V. 3, 1968, Dona, Palpa (at alt. 1420 m), T. MATSUMURA leg.; 1 ♂, 2 ♀ ♀, V. 3, 1968, Ghasa, Palpa (at alt. 2090 m), T. KUMATA leg.; 3 ♂ ♂, V. 8, 1968, Lete, Palpa (at alt. 2440 m), T. KUMATA leg.; 1 ♀, V. 9, 1968, Rukuche Khola, Palpa (at alt. 1600 m), T. KUMATA leg.; 1 ♂, 1 ♀, VI. 7, 1968, Gosainkund (at alt. 2500–3000 m), T. KUMATA leg. (the male is teneral); 2 ♂ ♂, 3 ♀ ♀, VI. 8, 1968, Khurumsang, No. 1 West (at alt. 2500 m), T. MATSUMURA leg. (one of the males is teneral), 1 ♀, *do.*, T. KUMATA leg.

The hind femora are with generally two setae, sometimes three setae, near the hind margin. I have been able to examine some specimens from India thanks to Dr. M. J. D. BRENDELL.

58. *Harpalus* (*Harpalus*) *indicola* BATES

Harpalus indicola BATES, 1878, Proc. Zool. Soc. Lond.: 714–715.

1♂, IV. 19, 1968, Godavari, Nepal valley (at alt. 1450 m), T. KUMATA leg.; 1♂, V. 2, 1968, Gorapani Deorali, No. 4 West (at alt. 2850 m), T. KUMATA leg.; 1♀, V. 11, 1968, *do.*, T. KUMATA leg.; 1♂, 4♀♀, V. 4, 1968, Ghasa, Palpa (at alt. 2090 m), T. KUMATA leg.; 1♂, V. 8, 1968, Lete, Palpa (at alt. 2440 m), T. KUMATA leg.; 1♂, V. 31, 1968, Dhunche, No. 1 West (at alt. 2000 m), T. MATSUMURA leg.; 1♂, 3♀♀, VI. 7, 1968, Gosainkund (at alt. 2500–3000 m), T. KUMATA leg.; 2♂♂, 1♀, VI. 8, 1968, Khurumsang, No. 1 West (at alt. 2500 m), T. MATSUMURA leg.

This species is rather variable: the femora and tibiae are sometimes dark, sometimes light, the punctures on the basal area of the pronotum are generally more or less sparse near the basal angles though sometimes rather dense, and the elytral intervals are almost flat to somewhat convex. I have compared Nepalese specimens with some Indian ones.

Harpalus himalayicus JEDLIČKA, 1966, Ergebn. Forsh.-Unternehmen Nepal Himalaya, pp. 237, 239, may be identical with *H. indicola*.

59. *Platymetopus flavilabris* (FABRICIUS)

Carabus flavilabris FABRICIUS†, 1798, Suppl. Ent. Syst.: 59.

1♂, 1♀, V. 16, 1968, Pokhara, No. 3 West (at alt. 830 m), T. KUMATA leg.

These specimens have brownish yellow legs, the tarsi in the female specimen being more brownish, with the fifth segment rather dark. The legs turn from yellowish into reddish to blackish in colour according as localities are west to east (cf. HABU, 1973, Fauna Japonica, Carabidae, Harpalini, pp. 209–212).

60. *Dioryche colombensis braccata* (BATES)

Platymetopus Colombensis NIETNER var. *braccatus* BATES, 1891, Ann. Soc. Ent. Belg., 35 (Compt. Rend.): cccxxx.

1♀, V. 16, 1968, Pokhara, No. 3 West (at alt. 830 m), T. KUMATA leg.

I have examined three specimens from Ceylon (the nominate subspecies) and six ones from India through the kindness of Dr. M. J. D. BRENDELL. So far the colour of the legs is of avail to distinguish *braccata* from *colombensis* as a local variety.

61. *Oxycentrus omaseoides* BATES

Oxycentrus omaseoides BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 344.

1♀, VII. 15, 1968, Adhabar, Terai Forest (at alt. 300 m), T. KUMATA leg.

62. *Lamprophonus lucens* BATES?

Lamprophonus lucens BATES, 1889, Ann. Mus. Civ. Stor. Nat. Genova, (2) 7 (27): 102.

1♀, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. MATSUMURA leg.

Lamprophonus is characteristic in having the middle tarsi not dilated even in the male, but the single specimen I have examined is unfortunately the female. In addition it does not agree well with BATES' statements "mentum fundo medio paullulum arcuatum haud vero dentatum" and "elytris . . . tenuiter striatis (striis hic illic subinterruptis)". Here I give a fresh description from the above Nepalese specimen.

Description. Length 9.2 mm. Width 3.7 mm.

Rather shiny, head black except clypeus and anterolateral areas of frons reddish brown, pronotum and elytra black, faintly brownish under spotlight, head (except reddish brown parts) and pronotum rather aeneous, faintly greenish, elytra a little more aeneous, somewhat purplish ; labrum and mandibles reddish brown, palpi and antennae light reddish brown, lateral margins of pronotum and lateral to apical margin of elytra brownish yellow, legs light reddish brown, femora a little pale or yellowish ; ventral side dark reddish brown.

Head convex, glabrous, densely punctate, punctures indistinct or absent at anterolateral areas and anteromedian area (just behind fronto-clypeal suture) of frons, marginal areas and posteromedian area (just before fronto-clypeal suture) of clypeus and tempora ; microsculpture absent ; supraorbital setae fairly before level of hind margin of eyes ; eyes large and convex, WH/WF 1.47 in one ♀, genuine ventral margin a little separated from buccal fissures, disparity between genuine and apparent ventral margins slight ; postgenae glabrous ; frontal impressions moderately impressed, extending posterolaterally, reaching frontal

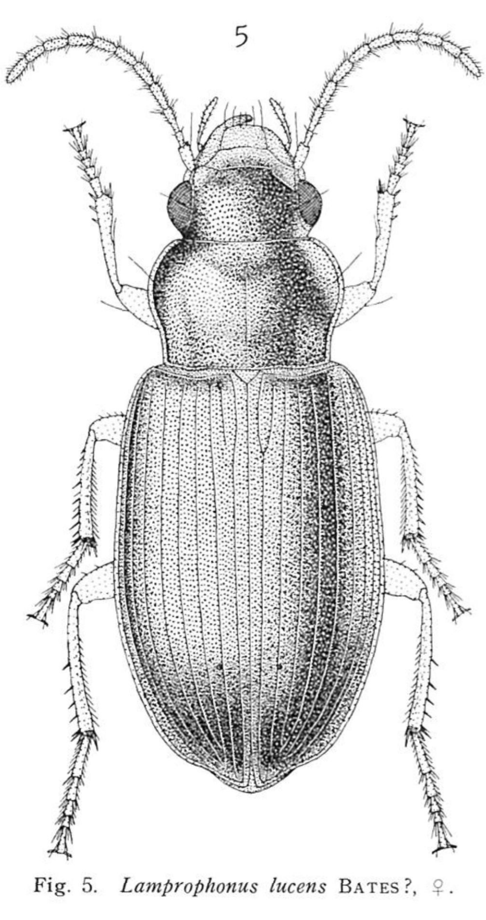

Fig. 5. *Lamprophonus lucens* BATES?, ♀.

lateral furrows ; frontal lateral furrows not fully deep ; antennae reaching basal one-eighth of elytra ; labrum even at apex ; penultimate segment three-fourths as long as apical segment in maxillary palpi, slightly shorter than apical segment in labial palpi ; mentum (Fig. 6) with tooth short and wide, truncate-rounded at apex, setae fully long.

Pronotum (Fig. 8) moderately convex, widest a little before two-fifths, one and one-fourth times as wide as head, one and one-half times as wide as long (WP/WH 1.23, WP/LP 1.48, WP/WBP 1.17 in one ♀) ; surface densely punctate, punctures finer on disc than on marginal areas though dense ; microsculpture absent ; apex even, border effaced at median area ; apical angles obtuse, rounded, not protrudent ; base slightly rounded at median area, straightly, gently oblique at lateral areas, border complete ; basal angles a little more than 90°, somewhat dull ; lateral margins bordered, roundly, well contracted anteriorly, distinctly sinuate posteriorly ; lateral furrows very narrow ; marginal setae at one-third ; median line fine, faintly reaching base, not reaching apex ; anterior transverse impression rather deep, posterior impression rather shallow ; basal foveae shallow, outside area flat.

Wings developed. Elytra elliptic-ovate, widest at middle, one and two-fifths times as wide as pronotum (WE/WP 1.39), one and four-sevenths times as long as wide ; surface with small dense punctures, punctures on outer intervals larger, obscurely confluent[2], rather sparse, very short and fine pubescence present at apical area ; microsculpture rather distinct, forming a little transverse meshes, almost isodiametric in part ; basal border shallowly sinuate opposite stria 3, thence straightly, gently oblique outward, forming fully wide angle at shoulder ; shoulder with a few very short and fine hairs, tooth absent ; lateral margin almost evenly, moderately dilated towards middle ; apical sinuation somewhat deep ; apex rounded ; striae moderately impressed, not punctate ; scutellary striole developed, free at apex on left elytron, obscurely reaching stria 1 on right elytron ; intervals completely flat, interval 3 with one pore at seven-tenths ; marginal series composed of about twenty-one pores (not well countable owing to punctures).

Hind femora bisetose near hind margin ; fore tibiae longitudinally sulcate and carinate, with three spines on anterior outer margin ; tarsi glabrous on dorsal side, fore tarsi of ♀ with segment 2 as long as wide ; tarsal segment 5 with two setae on either ventrolateral margin ; hind tarsi relatively short, a little more than three-fourths as long as

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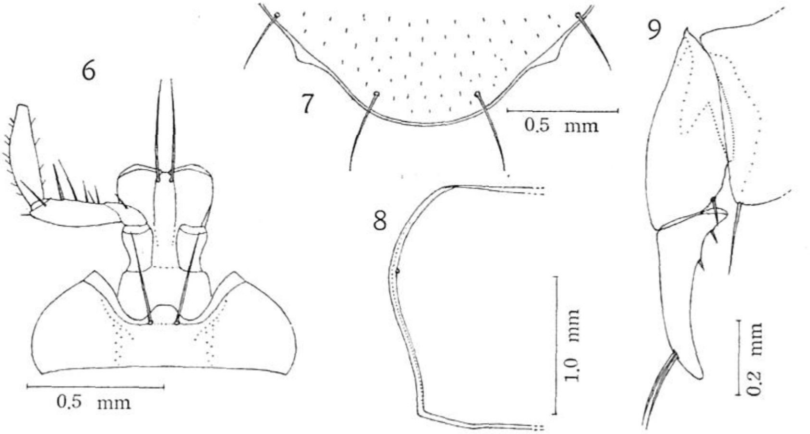
[2] "Die Punkte der äußeren Flügeldeckenzwischenräume zu groben Runzeln zusammenfließend, die Punktierung der inneren etwas dichter", according to SCHAUBERGER, 1935, Ent. Anz., 15 : 94.



Figs. 6-9. *Lamprophonus lucens* BATES ?
6. Mentum, labial palpus and ligula with paraglossae.
7. Female sternite 6. 8. Pronotum. 9 Female genitalia.

head width, segment 1 long, less than twice as long as segment 2, segment 5 fully shorter than segment 1, proportion 0.64 in one ♀.

Prosternum, mesosternum (less distinctly at central area), pro-, meso- and metepisterna, sternites and mid and hind coxae rather densely pubescent-punctate (hardly pubescent on all episterna), punctures smaller and less dense than on dorsal side; metepisterna long, L/W 1.53; sternite 6 of ♀ (Fig. 7) bisetose on either side, roundly, fairly protrudent posteriorly.

Basal segment of styluses (Fig. 9) with one distinct seta at outer apical area; apical segment slender, ventral outer margin with two short narrow spines, one before base, one near basal one-third, dorsal outer margin with two short narrow spines, each near basal one-third and near middle; hemisternites with one long distinct seta at apex.

63. *Harpaliscus birmanicus* BATES

Harpaliscus Birmanicus BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 341.

2♂♂, 2♀♀, IV. 28, 1968, Biratanti, No. 4 West (at alt. 1150 m), T. KUMATA leg.; 1♀, V. 3, 1968, Dana, Palpa (at alt. 1420 m), T. MATSUMURA leg.

I have made reference to this species (HABU, 1975, Trans. Shikoku Ent. Soc., 12 : 73-76).

64. *Acupalpus* (*Subacupalpus,* nov.) *sikkimensis* ANDREWES

Acupalpus sikkimensis ANDREWES, 1930, Trans. Ent. Soc. Lond., 78: 5, 20–21.
1♂, 1♀, VI. 22, 1968, Kathmandu (at alt. 1340 m), T. KUMATA leg.

Key to known Asian subgenera of *Acupalpus*

1. Tarsal segment 5 with one seta on either ventrolateral margin; prosternum almost glabrous, prosternal process without distinct setae; mandibles short .... *Acupalpus* LATREILLE
(Type-species: *A. dorsalis* (FABRICIUS) from Europe and Japan)
— Tarsal segment 5 glabrous on ventral side; prosternum with some distinct setae 2
2. Antennal segment 2 pubescent; pronotum with rounded basal angles 3
— Antennal segment 2 glabrous except for one seta on ventral side; prosternal process glabrous 4
3. Prosternal process with two distinct setae .... *Setacupalpus* HABU
(Type-species: *A. sobosanus* HABU from Japan)
— Prosternal process glabrous............ *Subacupalpus*, nov.
(Type-species: *A. sikkimensis* ANDREWES from India and Nepal)
4. Pronotum with basal angles rounded; mandibles short............ *Palcuapus* HABU
(Type-species: *A. inornatus* BATES from Japan and China)
— Pronotum with basal angles angulate; mandibles relatively long............ *Pseudanthracus* HABU
(Type-species: *A. sinuellus* BATES from Southeast Asia)

65. *Acupalpus* (*Pseudanthracus*) *sinuellus* BATES

Acupalpus sinuellus BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 350.
1♂, IV. 23, 1968, Balaju, Kathmandu (at alt. 1400 m), T. KUMATA leg.

66. *Stenolophus* (*Egadroma*) *smaragdulus* (FABRICIUS)

Carabus smaragdulus FABRICIUS†, 1798, Suppl. Ent. Syst.: 60.
1♀, V. 14, 1968, Kangre Deorali, No. 3 West (at alt. 1700 m), T. MATSUMURA leg.; 1♂, 1♀, V. 16, 1968, Pokhara, No. 3 West (at alt. 830 m), T. KUMATA leg.; 1♂, 1♀, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.; 2♂♂, 1♀, V. 22, 1968, Pokhara, No. 3 West (at alt. 830 m), T. KUMATA leg.

67. *Stenolophus* (*Egadroma*) *quinquepustulatus* (WIEDEMANN)

Badister 5pustulatus WIEDEMANN, 1823, Zool. Mag., 2 (1): 58.
1♂, 1♀, V. 21, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.;

1 ♂, VI. 21, 1968, Kathmandu (at alt. 1340 m), T. KUMATA leg.; 1 ♂, 1 ♀, VI. 22, 1968, *do.*, T. KUMATA leg.; 1 ♀, VII. 15, 1968, Adhabar, Terai Forest (at alt. 300 m), T. KUMATA leg.

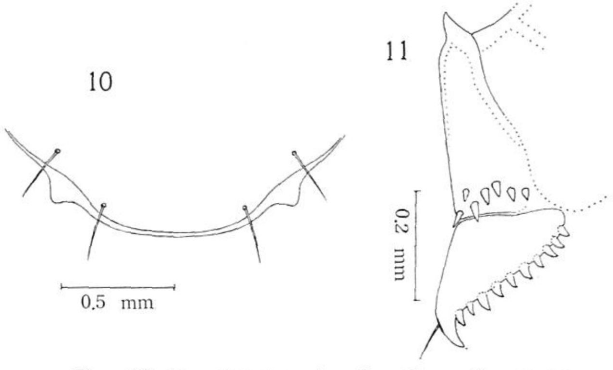
68. *Anoplogenius discophorus* CHAUDOIR

Anoplogenius discophorus CHAUDOIR, 1852, Bull. Soc. Nat. Mosc., 25 (1): 90.

1 ♂, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.; 2 ♀ ♀, VI. 21, 1968, Kathmandu (at alt. 1340 m), T. KUMATA leg.

These specimens almost fit the brief description given by SCHAUBERGER, 1938 (Arb. morph. tax. Ent. Berlin-Dahlem, 5, p. 51)—CHAUDOIR's description is not helpful to identify the species. The Rupakot example is smaller, about 5.5 mm in length, while the two Kathmandu examples are 7.0 and 7.4 mm.

As I already mentioned (HABU, 1973, Fauna Japonica, Harpalini, pp. 395–396), the styluses of *A. cyanescens* (HOPE) are strickingly different from those of *Stenolophus, Acupalpus, Bradycellus* etc. In *A. discophorus* they are fundamentally same as in *A. cyanescens*, but shorter and wider, the apical segment being with ten to eleven stout spines on the outer margin (Fig. 11). The outer setae on the sixth sternite of the female are also fairly distant from the lateral margins (Fig. 10) like in *A. cyanescens.*



Figs. 10, 11. *Anoplogenius discophorus* CHAUDOIR.
10. Female sternite 6. 11. Female genitalia.

69. *Pachytrachelus hellmichi* JEDLIČKA

Pachytrachelus hellmichi JEDLIČKA, 1965, Ergebn. Forsch.-Unternehmen Nepal Himalaya, Liefg. 2: 100.

2 ♀ ♀, VI. 14, 1968, Balaju, Kathmandu (at alt. 1400 m), T. KUMATA leg.

Tribe OODINI

70. *Oodes* (*Oodes*) *sulcicollis* sp. nov.

Description. Length 10.1–10.5 mm. Width 3.9–4.2 mm.

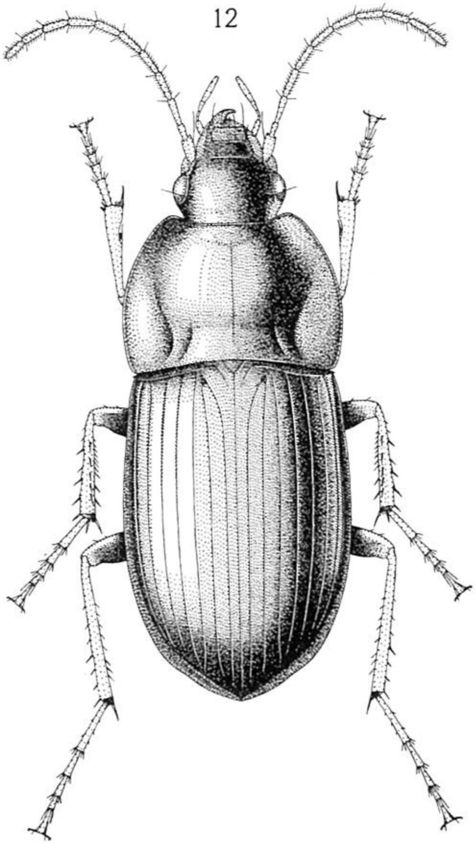


Fig. 12. *Oodes* (*Oodes*) *sulcicollis* sp. nov., ♀.

Black, shiny, elytra with rather faint bluish tinge (very faint in paratype); labrum and mandibles dark reddish brown, palpi and antennae yellowish brown, antennal segments 1 to 3 slightly reddish, pronotum widely brownish at lateral areas opposite to hypomera (so brownish parts narrowed anteriorly), femora black except reddish brown apical area, tibiae and tarsi light reddish brown; ventral side black.

Head rather convex, not punctate; microsculpture rather distinct, isodiametric; neck-constriction faintly visible on dorsal side; eyes smaller, a little less convex and more distant from buccal fissures than in three Japanese species[3] of nominate subgenus, WH/WF 1.35, 1.36 in two ♀♀; supra-orbital setae a little more remote from eyes in comparison with those of three Japanese species, a little before level of hind margin of eyes; frontal lateral furrows deep; fronto-clypeal suture distinct; clypeus bisetose; labrum shallowly emarginate at apex, setae normal; antennae fully extending beyond shoulder of elytra; mentum with tooth wide, bordered and truncate at apex.

Pronotum slightly convex, widest at about two-thirds, more than one and four-fifths times as wide as head, one and three-fifths times as wide as long (in one paratype and holotype WP/WH 1.81, 1.91, WP/LP 1.60, 1.62, WP/WBP 1.09, 1.12, WBP/WAP 1.64, 1.68 respectively), base only slightly wider or almost as wide as base of elytra; surface not punctate ; microsculpture rather distinct, meshes almost isodiametric or somewhat transverse ; apex even at median area, border complete though shallow at middle ; apical angles well protrudent, gently rounded ; base unbordered, emarginate at median area, faintly sinuate on either side ; basal angles narrowly rounded at apex, almost 90° (paratype) or a little more than 90° (holotype) in general shape ; lateral margins well bordered, roundly, fairly contracted towards apex, weakly roundly (holotype) or evenly (paratype), slightly contracted towards base ; lateral setae absent ; median line fine, reaching neither extremity ; anterior transverse impression somewhat deep, posterior impression shallow ; basal foveae composed of two somewhat deep impressions, inner impression short, outer impression long, curved, extending obliquely forwards beyond middle, inner and outer impressions not reaching base, interspace of inner and outer impressions somewhat convex ; either area between lateral margin and outer impression fairly convex.

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[3] *Oodes* (*Oodes*) *helopioides tokyoensis* HABU, *O.* (*O.*) *vicarius* BATES and *O.* (*O.*) *echigonus* HABU et BABA.

Wings atrophied. Elytra less convex than in three Japanese species, elliptic, widest at about middle, slightly wider than pronotum (WE/WP 1.03, 1.05 in two ♀♀), more than one and two-fifths times as long as wide ; surface not punctate ; microsculpture distinct, isodiametric ; basal border complete, gently oblique, nearly straight, forming almost rectangular angle at shoulder ; shoulder with acute tooth ; lateral margin gently dilated from shoulder to middle, shallowly sinuate at basal one-sixth ; apical sinuation shallow ; apex not rounded (holotype) or narrowly rounded (paratype) ; striae not punctate, well impressed, deep at basal area, striae 5 to 7 deeper (in holotype striae 1 to 4 a little shallower on disc), striae 1 and 2, 3 and 4, and 5 and 6 united at apex respectively, striae 2 to 7 reaching basal border, stria 7 deep at apical area, running along apical area of lateral groove, almost reaching suture ; scutellary striole deep, shorter than in three Japanese species in paratype, fully short and shallow in holotype ; intervals rather convex (almost flat on disc in holotype), basal area and outer intervals more convex, interval 3 without dorsal pore, interval 8 somewhat carinate at humeral area, not of ridge-form along stria 8, interval 9 fully wider than in three Japanese species, so that not forming lateral groove except at apical area ; apical area of lateral groove wider and shallower than in three species of Japan ; marginal series not interrupted.

Fore tibiae not sulcate ; in hind tarsi segment 1 one and five-sixths times as long as segment 2, twice as long as segment 5.

Ventral side densely punctate on mesepisterna, sparsely on lateral areas of metasternum, coarsely punctate (punctures somewhat confluent) on metepisterna, rugose-punctate on lateral areas of sternites 1 to 5; prosternal process obscurely and incompletely bordered (holotype) or distinctly, completely bordered (paratype) at apical area, not or weakly declined posteriorly, apical part almost rectangular in profile; metepisterna wide, L/W 0.70 in paratype; sternite 6 (♀) with two setae on either side.

Basal segment of styluses (Fig. 13) wide, with four fine short setae at outer apical area, apical segment not acuminate at apex, with two stout spines on ventral outer margin near middle, one stout spine on dorsal outer margin near base, apical orifice small, opened near apex, setae fine and short; hemisternites with several short fine setae at apical area.

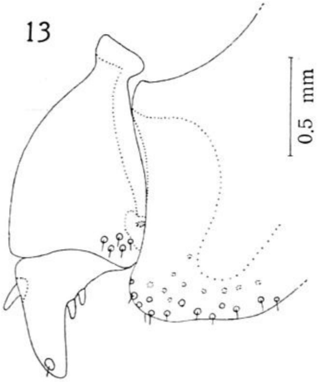

Fig. 13. Female genitalia of *Oodes* (*Oodes*) *sulcicollis* sp. nov.

Distribution. Nepal.

Type-series. Holotype: ♀, V. 11. 1968, Gorapani Deorali, No. 4 West (at alt. 2850 m), T. KUMATA leg. Paratype: 1♀, same as holotype.

Remarks. This new species appears to be allied to the Indian *O. caerulans* ANDREWES in having bluish elytra and shorter metepisterna, but the pronotum with the basal foveae composed of a short and a long curved impression, and the elytra without dorsal pores render the Nepalese species easy to distinguish from the Indian species.

Tribe CALLISTINI

71. *Callistomimus* (*Callistomimus*) *coarctatus* (LAFERTÉ)

Callistus coarctatus LAFERTÉ, 1851, Ann. Soc. Ent. France, (2) 9: 230.

2♂♂, IV. 29, 1968, Biratanti, No. 4 West (at alt. 1150 m), T. KUMATA leg.

This handsome species was illustrated in a colour plate by ANDREWES, 1921, Proc. Zool. Soc. Lond., pp. 246, 248, pl. 1, figs. 12, 12 a, 12 b.

72. *Callistomimus* (*Pristomachaerus*) *nepalensis* sp. nov.

Description. Length 6.7 mm. Width 2.6 mm.

Black, half-shiny; head (except clypeus) with weak aeneous tinge, clypeus reddish brown, labrum, mandibles, palpi and antennal segments 1 to 3 yellowish brown (mandibles less yellowish at apical half), antennal segment 4 reddish brown, remaining segments of antennae dark reddish brown, lateral margins of pronotum brownish, somewhat translucent, median basal area of pronotum faintly reddish, apical margin of elytra yellowish brown, elytra with three yellow patches, anterior patch somewhat brownish, small, at one-fourth on intervals 7 and 8, subapical patch rather large, on intervals 5 to 8, a little prolonged anteriorly and posteriorly on intervals 5 and 7, apical patch small, rather faint, reaching apex, placed obliquely on intervals 1 to 3, legs brownish yellow, tibiae pale except basal and apical areas, tarsi becoming more brownish towards apex; ventral side including epipleurae black, reddish on head. Pubescence on body yellowish grey.

Head fairly convex, densely, coarsely pubescent-punctate, interspaces of punctures fully narrow, weakly carinate, punctures somewhat sparse at anterior median area of frons, punctate area slightly extending posteriorly beyond level of hind margin of eyes, posterior area smooth; microsculpture absent; eyes moderately large and convex, WH/WF 1.68 in one ♂; antennal segment 4 one and one-fourth times as long as segment 3; apical segment of palpi slender, well narrowed towards apex.

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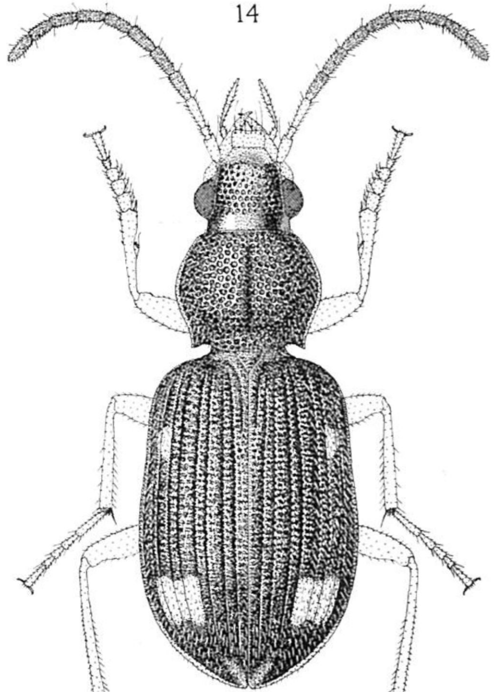


Fig. 14. *Callistomimus* (*Pristomachaerus*) *nepalensis* sp. nov., ♂.

Pronotum rather convex (less convex than in preceding *C. coarctatus*), widest at about middle, one and one-third times as wide as head, one and one-fifth times as wide as long (WP/WH 1.33, WP/LP 1.21, WP/WBP 1.31, in one ♂); surface pubescent, with large dense punctures, punctures larger than on head, interspaces of punctures narrow, rather carinate, with isodiametric microsculpture; apex weakly protrudent at median area; apical angles obtuse, rounded; base deeply sinuate on either lateral area; basal angles acute, reflexed, protrudent in posterolateral direction; lateral margins well rounded at middle, almost straight behind apical angles, fairly sinuate before basal angles; lateral explanate parts narrow but distinct, reflexed at posterior half; median line distinct, disc shallowly depressed along median line; anterior transverse impression indistinct, posterior impression somewhat deep; basal foveae fully deep.

Elytra convex, widest a little behind middle, one and one-half times as wide as pronotum (WE/WP 1.50 in one ♂), one and one-half times as long as wide; surface coarsely, densely punctate, punctures confluent, smaller than on pronotum; microsculpture distinct, isodiametric; lateral margin fairly sinuate at level of anterior patch; apex somewhat pointed, narrowly rounded; striae deep, punctate, obliterate at apical area; intervals convex, interval 1 raised from one-fifth to three-fourths, intervals 2, 4 and 6 distinctly narrower than odd intervals (interval 3 one and one-half times as wide as interval 2 at middle), intervals 1 and 3 a little (very slightly in interval 1) narrowed at level of subapical patch.

Ventral side of pro-, meso- and metathorax, sternites 1 and 2 and epipleurae more or less distinctly, coarsely punctate and pubescent, sternites 3 to 6 finely pubescent-punctate.

Distribution. Nepal.

Type-specimen. Holotype: ♂, V. 28, 1968, Ramche, No. 1 West (at alt. 1670 m), T. MATSUMURA leg.

Remarks. The new species is allied to *C.* (*P.*) *jucundus* ANDREWES from India, but differs in having the pronotum and elytra black and not greenish, the elytra with the smaller anterior patch which is situated far behind the shoulder, and an additional small patch near the apex, and the epipleurae wholly black instead of being "testaceous yellow".

I left the genital study to the future occasion for fear lest the elytral patches of the single specimen should discolour by hot water.

73. *Chlaenius* (*Rhizotrachelus*) *nepalensis* HOPE

Chlaenius Nepalensis HOPE, 1831, in GRAY, Zool. Misc.: 21.

1♂, VII. 25, 1968, Balaju, Kathmandu (at alt. 1400 m), T. KUMATA leg.

This species wholly black, never greenish, with a yellow patch on either elytron somewhat reminds of *Craspedophorus* or *Dischissus* of the Panagaeini.

74. *Chlaenius* (*Chlaeniostenus*) *circumdatus* BRULLÉ

Chlaenius circumdatus BRULLÉ†, 1835, in SILBERM, Rev. Ent., 3: 283.

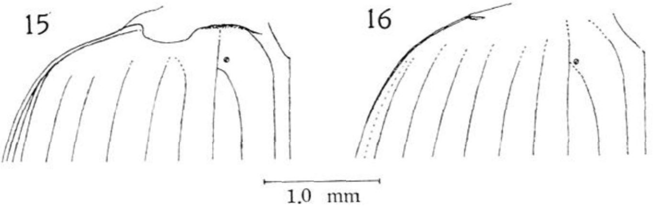
3♂♂, 1♀, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.; 1♀, V. 25, 1968, Balaju, Kathmandu (at alt. 1400 m), T. KUMATA leg.; 1♂, VI. 21, 1968, Kathmandu (at alt. 1340 m), T. KUMATA leg.

75. *Chlaenius* (subg. ?) *agilis* CHAUDOIR

Chlaenius agilis CHAUDOIR†, 1856, Bull. Soc. Nat. Mosc., 29 (3): 246.

2♀♀, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.

The species quite resembles *C. noguchii* BATES of our fauna, but is distin-



Figs. 15, 16. Left elytra at basal area in *Chlaenius* spp.
15. *C. agilis* CHAUDOIR. 16. *C. noguchii noguchii* BATES from Japan.

guishable from it by the complete basal border of the elytra as indicated in Figs. 15 and 16.

76. *Chlaenius* (*Chlaenius*) *apicalis* (WIEDEMANN)

Carabus apicalis WIEDEMANN†, 1819, Zool. Mag., 1 : 166.

1♀, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.

This handsome species and the following *C. punctatostriatus* form a natural group in the large genus *Chlaenius*.

77. *Chlaenius* (*Chlaenius*) *punctatostriatus* CHAUDOIR

Chlaenius punctatostriatus CHAUDOIR†, 1856, Bull. Soc. Nat. Mosc., 29 (3) : 244.

1♀, VI. 15, 1968, Godavari, Nepal valley (at alt. 1450 m), T. KUMATA leg.

78. *Chlaenius* (*Chlaenius*) *trinotatus* LAFERTÉ

Chlaenius trinotatus LAFERTÉ, 1851, Ann. Soc. Ent. France, (2) 9 : 240.

1♀, VII. 15, 1968, Adhabar, Terai Forest (at alt. 300 m), T. KUMATA leg.

This is a species allied to the Japanese *C. deliciolus* BATES.

79. *Chlaenius* (*Chlaenius*) sp.

1♂, V. 20, 1968, Rupakot Tal, No. 3 West (at alt. 750 m), T. KUMATA leg.

80. *Chlaenius* (*Chlaenius*) *comans* ANDREWES f. *exoletus* ANDREWES

Chlaenius comans ANDREWES, 1919, Ann. Mag. Nat. Hist., (9) 4 : 15–16.

Chlaenius comans ANDREWES var. *exoletus* ANDREWES, 1924, Miss. Ind. Babault, Carab. : 28, 89–90.

1♂, V. 16, 1968, Pokhara, No. 3 West (at alt. 830 m), T. KUMATA leg. ; 3♂♂, V. 22, 1968, *do.*, T. KUMATA leg.

I owe the identification of this species to Dr. P. M. HAMMOND of the British Museum. This "variety" is, according to ANDREWES (1924), is not a geographical one.

CORRECTION

Atamuka nom. nov.

Kumataia HABU, 1973, Bull. Natl. Inst. Agric. Sci., (C) no. 27 : 103 (nec KIRIAKOFF, 1967).

Dr. T. KUMATA kindly informed me that *Kumataia* had already been used as a Lepidopterous genus. *Atamuka* is an anagram of Kumata and its gender is feminine.

Judging from the structure of the styluses, this genus belongs to the subtribe Platynina. The styluses of *A. coriacea* (HABU) (Fig. 17) are rather wide, the basal segment is with about ten moderately long setae at the apical area, the apical segment is well dilated outward at the base, the ventral outer margin is fully deeply sinuate, with three rather stout spines, and the dorsal side is with one rather long and stout spine which is visible in a ventral view.

17

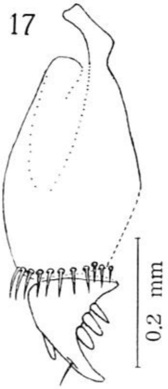


Fig. 17. Left stylus of *Atamuka coriacea* (HABU).

Notes on the Tenebrionidae from Taiwan and Japan, I. (Coleoptera)

By TAICHI SHIBATA

For the presentation of the reports I should like to express my deep thankfulness to the following gentlemen for their great favours of literature, materials and other ways: Messrs. MICHITAKA CHÛJÔ, MASAO HAYASHI, SADANARI HISAMATSU, HIROSHI ISHIDA, MUTSUO MIYATAKE, TAKEHIKO NAKANE, SIZUMU NOMURA, HITOO OHIRA, MASAFUMI OHKURA, KOHEI SAWADA and the members of the Osaka Coleopterological Society.

Spiloscapha kobayashii sp. nov.

Oval, moderately convex and not very shiny. Reddish brown, elytra black with a yellow-orange fascia on each elytron, antennae more or less darkened distally from 5th joint. Pronotum blackish for most area of disc, saving a basal part before scutellum, its ill-defined black patch expanded at apical and again at basal areas. Yellowish fascia placed on basal third of elytron, transverse, reaching outer side but not inner sutural space, sending a branch to base along 5th interspace, and twice dentate at its posterior side, of inner tooth long, extended to near middle on 3rd interspace, another short one on 7th interspace, deeply sinuate between them. Elytra sometimes vaguely reddish along latero-apical furrows.

Head uneven, largely depressed above, strongly rather densely punctate, a little raised in middle and almost straight at apical side of clypeus, with a clear shagreened microsculpture. Eyes deeply sinuate by raised genae, their upper lobe smaller than lower one. Antennae reaching base of elytra, 3rd as long as basal two joints together, from 5th to 10th subtriangular, subequal in length and thickness to each other, and gently dilated toward respective apex, 11th elliptic, longer than wide, nearly twice as long as 10th and rounded at apex. Mentum subquadrate with some small rounded hollows.

Pronotum more than twice as wide at base as its median length, which even with its apical width (3.2 : 1.5 : 1.5); sides from base at first gently arcuate-narrowing to middle, then strongly linear-convergent

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 19–27, Dec., 1978〕

forward, apical side deeply emarginate, apical angles consequently distinctly protrudent in a sharp angle, apical margin widely interrupted in middle and sulcate behind, lateral furrows deep, a little widened before middle, base slightly bisinuate, obliquely truncate at each lateral side in width of the furrow and well fitting with corresponding parts of elytra ; disc clearly sparsely punctate, punctures somewhat smaller, shallower than those on head and becoming finer laterad, basal foveae weak, microsculpture obsoletely shagreened. Scutellum semicircular, reddish.

Elytra a half longer than wide, widest at basal third, from which gradually, very weakly decreasing backward in swell and width, somewhat flatly depressed on apical extreme area, usual subapical sinuation of lateral sides weak, indistinct, base well conformed to curvature of pronotal base ; 1st to 7th striae clear, rather regularly impressed, 8th barely visible, 1st stria deepened in apical portion, seriate punctures moderate, a little larger than those of interspaces, but confounded with the latters near scutellum, interspaces flat, 7th and 8th costate together between them in apical fourth, lateral furrows deep, terminate at subapical sinuation as usual, microsculpture like pronotum.

Prosternum longitudinally elevated in middle, roughly rugosely punctate beside the elevation in front area, propleura and epipleura of elytra impunctate, prosternal process slightly widened toward rounded apex, finely sparingly haired as like as on frontal median part of metasternum, which distinctly punctate laterally, metepisternum more densely so. Abdomen finely and shallowly punctate, erect fine hairs scantier than those on metasternum. Microsculpture of underside alike on upperside. Legs similar to *ichihashii.*

Length : 6.2 mm.

Holotype : ♂, Funchifu, Chiai Hsien, Taiwan, 20. VII. 1970, T. KOBAYASHI leg. (T. SHIBATA coll.).

The present species is closely related to *S. assamica* KASZAB from India and *S. ichihashii* NAKANE from Japan, if their pronotum and elytra are becoming deeper in colour, it is difficult to differentiate the former from the latters. In *assamica*, the lateral sides of pronotum are more arcuately narrowed apicad, so the apical corner is a right angle, but in the present species the sides are straightly convergent from middle and the apical side is deeply emarginate, consequently the corner between them is rather strongly prominent in a sharp angle, moreover the elytra are short of rotundity in dorsal profile. In *ichihashii*, the pronotum rather resembles *assamica* in form and is less transverse in proportion than that of the present species and the body is smaller (5 mm.).

Pentaphyllus oblongus LEWIS, 1894

LEWIS, Ann. Mag. nat. Hist., (6) 13 : 398, 1894 ; GEBIEN, Phil. J. Sci., 28 : 127, 1925 ; KASZAB, Ann. hist.-nat. Mus. Nat. Hung., 7 : 95, 1956.

Oblong, subcylindrical, reddish testaceous, mouth parts, antennae and legs paler, less shiny, rather densely clothed with very short, recumbent ciliae above and below. The clothes on pronotum and elytra showing as a pruinous pubescence and giving a dull appearance on upperside.

♂. Head with a conical, erect horn on inner each side of eye, horns short but robust and blunt at apex, frons between them depressed and then deeply excavate to vertex, almost glabrous and shiny throughout, remaining areas of head very finely, delicately and feebly sculptured. Clypeus circularly convex in middle, more or less depressed before horns, apical side with genae evenly rounded in a gentle curve, somewhat angulate on either side. Clypeal suture fine, and clearly separates clypeus from frons behind median convexity. Eyes coarsely facetted and sinuate in front as a rule. Antennae relatively long, 2nd joint not distinctly thicker than 3rd, 4th and 5th respectively not shorter than 3rd, from 7th to 11th rather loosely articulate, forming a slender, elongate club, 7th widely triangular, a little wider at apex than long, 8th to 10th transverse but less than twice as wide as long, 11th almost circular, somewhat irregular near apex, its length a trifle shorter than median width and clearly longer than 10th. Ventral area of head between eyes coarsely punctate, its distance a little wider than transverse greatest width of single eye. Last joint of maxillary palpi not fairly securiform, rather spindly. Mentum carinate in middle.

Pronotum less than half again as wide as long, not strongly but transversely convex, sides feebly arcuate and slightly narrowed forward from apical fourth, therefore almost straight for most part in lateral view, not so clearly rounded as in *philippinensis*, apical side finely marginate, disc densely punctate. Scutellum also densely punctate.

Elytra a half longer than wide, base a little narrower than pronotal base, sides parallel to apical third, disc densely punctate, punctures like on pronotum, without visible striae, if some striae visible, they are nothing more than the reflection of punctate impressions on ventral side of diaphanous elytra.

Underside uniformly, roughly and indistinctly punctate. Prosternum almost horizontal to its process, relatively long, space between apical side and front margin of procoxa a little narrower than its longitudinal diameter of coxal cavity. Mesosternal process long, extending to near hind side of mesocoxae. Legs cylindrical, simple (lacking of their front tibiae, but considering hind pairs in form and build).

Length: 2.2 mm.

Examined specimen: 1♂, Mt. Kasuga, Nara Pref., Japan, 29. VII. 1972, M. YOSHIKAWA leg.

The species has very close resemblance to *P. biconiger* GEBIEN from Borneo and

Philippines and no discriminating points from the latter according to the monograph (Phil. J. Sci., 28: 121 & 125, 1925), however, the last five antennal joints forming a rather loose and elongate club and the prosternum is almost horizontal to its process throughout. The male cephalic horns are conical, tuberculiform and robust, situating obliquely close to inner sides of eyes, likewise as those of small ♂ of *P. philippinensis* KASZAB, but thicker and bolder in style, therefore the space between them on frons is much narrower than that in the latter species.

Pentaphyllus quadricornis GEBIEN, 1914

GEBIEN, Sarawak Mus. J., 2 (5): 23, 1914; Phil. J. Sci., 28: 121 & 125, 1925; KASZAB, Ann. hist.-nat. Mus. Nat. Hung., 7: 96, 1956.

The present species was first described from Borneo. As I was unable to consult the original description, I determined it by KASZAB's key. If my judgement is proper, the species occurs in Taiwan.

Examined specimens: 29♂♂ 26♀♀, Kentingkunyen, Pintung Hsien, Taiwan, 12 & 14. VIII. 1969, Y. MAEDA and T. KOBAYASHI leg.; 1♂ 1♀, Tanan, Taitung Hsien, Taiwan, 21. VII. 1972, Y. MAEDA leg.

Pentaphyllus philippinensis KASZAB, 1956

KASZAB, Ann. hist.-nat. Mus. Nat. Hung., 7: 94 & 96, 1956; Ent. Rev. Japan, 16 (2): 41, 1964; M.T. CHûJô, J. Fac. Agr. Kyushu Univ., 14 (1): 16, 1966.

The species is new record from Taiwan.

Examined specimens: 9♂♂ 6♀♀, Kentingkunyen, Pintung Hsien, Taiwan, 12 & 14. VIII. 1969, T. KOBAYASHI leg.; 15♂♂ 14♀♀, Lanhsu Is., Taitung Hsien, Taiwan, 10. X. 1970, 24. IV. 1971, 3 & 5. VI. 1972, Y. HAYASHI and Y. KIYOYAMA leg.; 1♂, Mt. Banna, Ishigaki Is., Okinawa Pref., Japan, 22. IV. 1964, H. KONISHI leg.; 3♂♂ 8♀♀, Minami-Daito Is., Okinawa Pref., Japan, 30. VII. 1965, Y. HAMA leg.; 1♂ 1♀, Nakanoshima Is., Tokara Islands, Kagoshima Pref., Japan, 12 & 14. VII. 1961. Y. HAMA leg.

Pentaphyllus dilatipes sp. nov.

Robust, oblong oval, strongly convex above, pronotum and elytra rather vertically fallen down in lateral side. Shiny, but not very brilliant, reddish brown, mouth parts, tibiae and tarsi somewhat yellowish, finely and not densely ciliate on the whole upper and undersides.

Head semicircular, clypeus rounded at apex, with a pair of erect horns in ♂, horns just situating upon genae at inner frontal edge of eyes, long, subparallel but slightly oppositely incurved near middle to each other and bending backward a little in apical part, with very fine, scattered ciliate-punctures; genae evidently short even in unarmed ♀ and more or less rounded, so it appears to form within clypeus in a uniform gentle curve, especially in ♂ at first sight seems to be absent because genae entirely occupied by horns; clypeus and genae in ♀ finely sparsely punctate, in ♂ almost smooth, with shagreened microsculpture; frons in ♂ trapezoidal, fairly evenly depressed to vertex, clearly bounded from clypeus and eyes, glabrous and polished, in ♀ slightly depressed in front but gradually elevated behind, rather closely punctate as like as on raised occiput of ♂; neck moderately constricted. Eyes more obliquely placed than in the preceding two species, consequently less prominent laterally and their lower part distinctly greater than upper one, so ventral space of head between them three-fourths to almost as wide as greatest width of an eye, while subequal in the preceding two species; inner upper edge of ♀ finely carinate and well defined from frontal depression. Antennae short, apparently 10-jointed as in *punctatus*, 2nd thicker than 3rd, club compact, 7th to 10th transverse, subequal in width to each other or only 10th a little narrower, 11th smaller and very closely articulate to 10th as if the former sunk into the latter. Mentum tuberculate in middle. Under head sculptured like on frons of ♀.

Pronotum strongly transversely convex, in ♂ elevated enough in its all width, much more distinct and larger than in ♀, especially on laterofrontal areas, therefore seemingly subquadrate; widest before base, where more than half again as wide as long in ♂ and less so in ♀, sides strongly arcuate and narrowing frontad, side margins narrow, finely slightly crenulate on outer edge, apical side arched, convex forward, basal side feebly bisinuate, both entirely marginate, apical angles obtusely rounded and basal ones quite rounded; disc not densely but distinctly punctate, with a smooth median line. Scutellum triangular, rounded at sides and punctate.

Elytra strongly swollen above, sides gradually widened behind and a half longer than wide at base, base of ♀ a little and of ♂ distinctly narrower than greatest width of pronotum, shoulder callus convex, prominent, side margin rather distinctly reflexed from frontal top of the callus to subapical faint sinuation, lateral furrows somewhat narrower than those of the preceding two species, disc without visible striae, distinctly punctate as on pronotum, but punctures irregular, widely spread over ground. Epipleura apparently glabrous, shiny.

Prosternum extremely short, space between apical side and front margin of procoxa barely equal to its intercoxal width, with propleura sparingly punctate, punctures a little denser on lateral sides of latter, prosternal process usual in build. Metasternum distinctly and not densely punctate except for glabrous middle area, which with a longitudinal sulcus in hind half and a deep transverse one on each side along metacoxae bringing together distinct punctures, moderately convex between these sulci, metasternal process punctiform, convex behind close truncate mesosternal process. Punctures of abdomen similar those on metasternum and metepisternum, stronger laterad and finer apicad. Legs similar in proportion to the preceding two species, but tibiae not cylindrical, rather flat and more or less dilated toward apex in both sexes, especially of front one, which forming a narrow triangle and angulate at apex, with a row of seta-like spines along outer side, spines numerous near its apical edge, in ♂ more distinct than in ♀.

Length: 2.5 mm.

Holotype: ♂, Liukuei, Kaohsiung Hsien, Taiwan, 21. VI. 1972, Y. KIYOYAMA leg. (T. SHIBATA coll.). Paratypes: 2♂♂ 4♀♀, Kentingkunyen, Pintung Hsien, Taiwan, 12 & 14. VIII. 1969, Y. MAEDA and T. KOBAYASHI leg.; 1♂, Tanan, Taitung Hsien, Taiwan, 21. VII. 1972, Y. MAEDA leg.; 1♂, Iriomote Is., Okinawa Pref., Japan, 27. VII. 1962, Y. HAMA leg.

P. spinipes GEBIEN and *P. parallelus* KULZER from Philippines, to which it is closely allied on the evident feature of tibiae, distinguished by the peculiar antennae in build, whose distal two joints are so closely articulate to each other as single joint that the antennae appear to merely 10-jointed. On the other hand it is nearly related in the up-mentioned antennal form to *P. nanus* KASZAB from Fiji Is. or *P. punctatus* KULZER from Caroline Is., but differs in its spinous and dilated tibial character.

Metaclisa hamai sp. nov.

Shiny, black, mouth parts, basal two joints of antennae, trochanters, basal and apical joints of tarsi reddish brown, underside sometimes reddish.

Head weakly arcuate at apex of clypeus and slightly sinuate at lateral sides, with a little raised genae and shallow frontal suture; punctures fine and dense in front of suture, then finer apicad, and much larger, somewhat sparser on raised interocular area. Eyes prominent, a little more transverse than in *nagaii*. Antennae relatively long, attained to basal angle of pronotum, from 6th joint widened ahead, 8th to 10th individually about as long as wide, 11th a little longer than wide. Mentum subpentagonal, its apex directed to front, longitudinally costate in middle as in *nagaii*.

Pronotum transverse, 1.6 or 1.7 times as wide as long, sides subparallel in basal half, then arcuately narrowing frontad, front angles seen from above, a little produced but rounded, front side deeply emarginate, finely margined at each side and rather distinctly sulcate behind, side margins relatively wide throughout, bringing deep sulcus together close inside, base bisinuate, hind angles rectangular; disc moderately convex but sloping gradually latero-apicad near front angles, so laterofrontal sides less convex than in *nagaii*, strongly sparingly punctate on major area, more finely so on lateral extreme parts. Scutellum triangular, glabrous.

Elytra a little wider at base than pronotum, weakly expanded near middle at sides, less convex above than in *nagaii*; regularly punctate-striate, striae slightly finely impressed, punctures distinct, somewhat shallow, both more or less enfeebled toward apex, interspaces obsoletely, minutely and dispersedly punctate, flat, sutural one weakly convex as usual, costate on 8th interspace in apical fourth along 7th stria, lateral borders and furrows moderate.

Prosternum elevated along middle in the same level with its process, therefore nearly horizontal when viewed from lateral side, strongly punctate on each side, propleura shallowly punctate, but punctures of their front areas coarsely longitudinally rugose, while in *nagaii* punctuations of propleura deeper, not rugosely confused ; prosternal process a little widened to triangulate apex, punctate and distinctly furrowed laterally. Metasternum almost glabrous, very finely sparsely punctate except on roughly sculptured front area and along mesocoxae. Elytral epipleura, meso- and metepisterna finely sparingly punctate. Abdomen distinctly punctate, especially on 1st segment, but punctures gradually becoming finer distally, somewhat mainly strigose on each lateral side of 1st and 2nd or 3rd segments. Legs quite similar in *nagaii*, punctures on meso- and metatibiae finer than those on protibia.

Male genitalia well alike those of *nagaii*, a little rounded in front of tapering apex, the same position of *nagaii* more angulate and genitalia themselves more curved toward ventral side.

Length : 7.5–8 mm.

Holotype, ♂, Minami-Daito Is., Okinawa Pref., Japan, 23. VII. 1965, Y. HAMA leg. (T. SHIBATA coll.). Paratypes, 4♂♂ 4♀♀ and examined specimens, 5♂♂ 5♀♀, same data as holotype.

This new species closely resembles *M. nagaii* NAKANE from Amami-Ohshima Is. and Tokunoshima Is., Kagoshima Pref., Japan, but the body black without a bluish metallic tinge, pronotum more transverse, elytra less convex, sculptures on underside partly different and antennae a little longer with more elongate distal joints. On the last character in *nagaii* they are comparatively short, not nearly reaching pronotal base, of which 8th to 10th joints transverse, more closely articulate and respectively a little wider than long, 11th scarcely as wide as long, but in the new species, the antennae are a little farther back and arrived at base of pronotum, 9th and 10th about as long as wide, 11th a little longer than wide. Prothoracic front angles rather produced forward or more sharply angulate in dorsal aspect, while those of *nagaii* obtusely rounded, lateral and apical areas of pronotum convex, a little more strongly slanting down to their extremities.

Metaclisa ornata sp. nov.

Robust, subparallel-sided, not very convex above. Shiny, black, elytra with a faint bluish metallic tinge, mouth parts, basal joints of antennae and trochanters reddish brown, tarsal joints and often underside reddish. Elytra ornamented with orange zigzag fasciae before middle, fascia transverse, reaching lateral sides but not sutural ones (in one of the examined three specimens reaching sutural interspace and obscurely extended to near base), and emitting two anterior and three posterior teeth, anterior ones on 3rd and 6th interspaces, posterior on 3rd, 5th and 7th and more or less sinuate between them, moreover the fascia generally a little produced forward along lateral side.

Head trapezoidal, apex of clypeus rectilinear, sides straightly divergent back a little and shallowly penetrated into eyes; clypeus somewhat raised in middle, densely punctate as on raised genae, punctures finer frontad and laterad; interocular space convex, deeply sulcate along inner edge of eyes and strongly punctate, punctures larger, rather sparser than those on clypeus but much finer and denser beside sulci; frontal suture fine. Eyes transverse, similar in shape to *atrocyanea*. Antennae hardly at all reaching base of pronotum, from 6th to 9th dilated internally, 6th and 7th subtriangular, as wide at apex as each outer length, 8th and 9th more transverse and irregular in form, a little angulate at inner basal side and subequal in width to the following two joints, of which 10th transverse, symmetrical, a half wider than long, 11th ovate, as wide as long and obtusely rounded at apex. Mentum subpentagonal, longitudinally convex in middle, its apex more rounded than in *nagaii* and *hamai*.

Pronotum more than half again as wide as long, sides slightly sinuate before middle but almost parallel from base to middle and arcuately narrowed in front half, lateral margins narrow but clear, their inner furrows moderate in depth, front side shallowly emarginate, and finely margined excluding a little raised middle part, sulcus obsolete along margin, front angles obtusely rounded, hind ones rectangular, base linear in lateral third and rather deeply produced backward in middle as a gentle rounded lobe; disc evenly convex, uniformly declivous laterad, not barely closely but sparsely punctate, punctures strong, smaller than on interocular space, those on lateral furrows extremely fine and much more numerous. Scutellum triangular, glabrous, sometimes reddish.

Elytra less than twice as long as wide at base, which a little wider than base of pronotum, flatly convex for major inner disc, sides subparallel or very feebly expanded behind middle, lateral borders and furrows gradually widened backward from shoulders to their apical ends, base forming a continuous outline with the curvature of pronotal base; striae obscure, punctures in striae distinct, gradually diminishing apicad in size, interspaces quite flattened even on sutural one, with minute and scattered punctures, apical costa of 8th interspace weak along 7th stria; punctures of lateral furrows fine as on interspaces, denser near their terminals.

Prosternum horizontal, coarsely rugate-punctate on each side of middle, sculpture on front areas of propleura mostly reticulate by large punctures among longitudinal wrinkles, prosternal process slightly dilated behind in a shield, with apex triangularly pointed, distinctly furrowed laterally, roughly punctate in middle and bearing fine curled hairs, which in ♂ denser than in ♀. Mesosternum deeply excavate in V-shape, received foregoing process and its frontal points raised, sharp. Metasternum in ♂ roughly punctate, finely and poorly haired in middle, but in ♀ almost glabrous except behind mesocoxae, where coarsely and wrinkly sculptured in both sexes, finely punctate on lateral sides as well as meso- and metepisterna. Elytral epipleura similarly punctate on metepisternum, completely bordered internally as usual. Abdomen punctate and more or less rugose laterally from 1st to 3rd segments, but punctures of 4th and anal ones usually finer, basal two segments of ♂ furnished with hairy median patch as secondary sexual feature, while in *atrocyanea*, poorly haired on middle of 1st segment. Legs alike those of *atrocyanea* in build and proportion, but fore tibiae more distinctly sculptured.

Male genitalia as in *atrocyanea*, but somewhat stouter, their tapering apical part a little shorter and thicker.

Length: 8.5–9 mm.

Holotype: ♂, Malapa?, Nantou Hsien, Taiwan 28. VII. 1970, Y. ONG leg. (T. SHIBATA coll.). Paratypes: 2♀♀, Mt. Lishan, Taichung Hsien, Taiwan, 17. VIII. 1973 & 15. VIII. 1974, Y. KIYOYAMA leg.

The presence of the ornate pattern on elytra is peculiar among the known Oriental species of the genus. On the form and size the new species appears to approach *M. atrocyanea* LEWIS from Japan, however, having less convex and much less sculptured upperside and on the other hand underside of more complicated sculpture and more distinct feature of the male.

A New *Parena*-species from Taiwan (Coleoptera, Harpalidae)

By MASAFUMI OHKURA

Parena formosana sp. nov.

Length: 8.0–9.0 mm. Width: 3.8–4.0 mm.

Shiny, light brownish yellow, head, antennae, pronotum, sutural, lateral and apical sides of elytra and legs more reddish brown to brown. Each elytron with two dark brown spots, a basal linear spot of which on interval 5 and a postmedian rounded spot on interval 4, rarely with an extra limbal spot at subapical external area, sometimes former basal spot vanished, latter postmedian one obsolete or invaded on intervals 3 and 5.

Head narrow, its width including eyes scarcely wider than that of pronotum; surface microscopically and sparingly punctured, without visible microsculpture; lateral grooves on frons distinct, usually rugose; eyes well prominent and tempora very short; antennae slender, fully beyond pronotal base, segment 3 relatively long, a little shorter than segment 1; mentum rather deeply emarginate in middle, lateral lobes acute at apex, epilobes narrow, basal transverse suture well impressed.

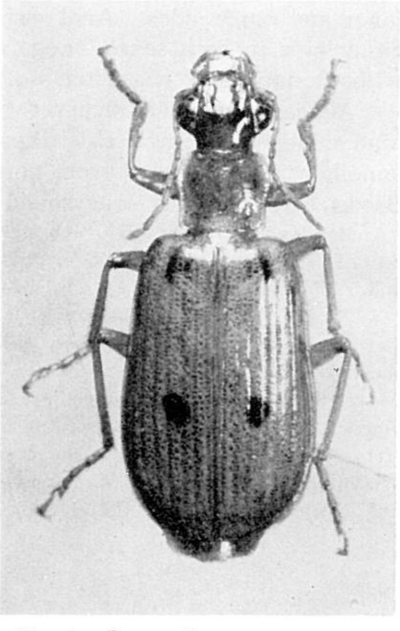


Fig. 1. *Parena formosana* sp. nov.

Pronotum subsquare, widest before middle, where almost as wide as long or a little wider than long, from which rounded in front and linearly narrowed behind or feebly sinuate before base; apical margin very feebly emarginate, subequal in width to basal margin, which straight excluding oblique lateral parts, lateral margins rather distinctly reflexed at basal half, lateral explanate areas wide, moderately deep and fused into basal foveae, both shallowly and obscurely punctured and somewhat wrinkled; front angles rounded, hind ones subrectangular but not sharply angulate; surface microscopically and sparingly punctured, but basal area and apical one in front of subapical transverse impression distinctly punctured; microsculpture obscurely isodiametric; median line deepened on basal area; front marginal seta placed at widest point and hind one near base.

Winged. Elytra without dorsal depression and visible microsculpture, more than twice as long as wide at base, gradually widened to near apex; humeral angles rounded but sharp, apex gently obliquely truncate; striae deep, distinctly rather densely punctured, intervals almost flat or slightly convex, punctures as those on striae but sparser, interval 3 with three setiferous pores, first pore subbasal and second one near middle, both adjoining stria 3, third pore small, subapical and adjoining stria 2; umbilicate series on interval 9, uninterrupted, about twenty-five in number.

Underside moderately pubescent, prosternal process constricted in front of space between procoxae as that of *P. perforata* BATES, metasternum punctured laterally, metepisterna narrowed behind, sulcate at inner and outer sides. Anal segment of abdomen with two setae on either side in both sexes. Legs alike as those in *P. tripunctata* BATES, without noticeable character.

Aedeagus slender, incurved ventrally in middle, a little tumid behind middle on ventral side, thence gradually tapering to apex, apical lamella widely rounded from dorsal sight, alike as that of *P. cavipennis* BATES, but straightly lengthened in lateral view.

Holotype: ♂, 5. V. 1973, Sungkang, Nantou Hsien, Y. KIYOYAMA leg. (in T. SHIBATA's coll.). Paratypes: 1 ♂, 7 ♀♀, 15, 20. IV. and 4, 8. V. 1973, ditto, S. TAKEDA and Y. KIYOYAMA leg.; 1♀, 3. IV. 1973, Nanshanchi, Nantou Hsien, S. TAKEDA leg.; 1 ♀, 30. III. 1970, Lishan, Taichung Hsien, H. NOMURA leg. (in the author's coll.).

The present species is closely allied to *P. tesari* JEDLIČKA from Taiwan, but in the latter the body is larger (11 mm.), the pronotum is narrower than head and wider than long, its basal angles are acuminate and outwardly prominent, and the elytra without discal spots according to the original description. *P. sticta* ANDREWES from Burma is also related to the present species, however, the former having the smaller body (6.0–6.5 mm.), more acuminate and prominent prothoracic basal angles and dissimilar pattern on the elytra.

On Some Species of Ground Beetles from the Ryukyus Hitherto Unknown or Poorly Known to Japan (Coleoptera, Carabidae)

By AKINOBU HABU

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I have recently examined the specimens of Carabid beetles Mr. K. TERADA, who is studying the Laboulbeniales of ground beetles in the Hiroshima University, took from the Ryukyus. I give in this paper some notes and descriptions to the three species hitherto not known from Japan and the two species poorly known in our fauna.

Thanks are due to Mr. K. TERADA for his offering the valuable specimens.

HARPALINI

Hyparpalus formosanus JEDLIČKA

Hyparpalus formosanus JEDLIČKA, 1940, Neue Carab. Ostasien, part 13 : 11 (Formosa); HABU, 1973, Fauna Japonica (Ins. Col.), Carab., Harpalini : 201–204, figs. 342–344, 347, 349, pl. 15, fig. 3.

Since only one male specimen has been known from Japan, I supplement some characteristics on the basis of a single female specimen (Ishigaki, Ishigaki Is., V. 12, 1977, K. TERADA leg.).

Supplemental description. Length 8.1 mm. Width 3.3 mm. WH/WF 1.53, WP/WH 1.60, WP/LP 1.56, WP/WBP 1.19, WE/WP 1.21. Hind tarsi (♀) a little longer than head width (proportion 1.08), with segment 1 one and five-sevenths times as long as segment 2, segment 5/segment 1=0.63. L/W of metepisterna 1.35.

Basal segment of styluses (Fig. 1) with one rather long and stout seta at apical area, apical segment moderately curved, with one short but distinct seta on dorsal outer margin before base, subapical setae fully long; hemisternites not reaching base of apical segment of styluses, with two rather long stout setae at apex.

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 31–37, Dec., 1978〕

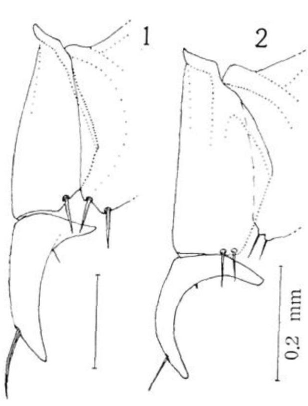
Oxycentrus changi HABU

"Taiwan-kubinaga-gomokumushi"

Oxycentrus changi HABU, 1978, Ent. Rev. Japan, 31: 103–106 (Formosa: Xin po).

This species was described from the two male specimens collected in Formosa. A female specimen having been found from Iriomote Is., I add some characteristics to the original description.

Supplemental description. Length 8.0 mm. Width 2.9 mm. WH/WF 1.59, WP/WH 1.57, WP/LP 1.18, WP/WBP ca. 1.18, WE/WP 1.25. Elytra one and two-thirds times as long as wide (♀); scutellary striole rather short (a little longer than in single paratype from Formosa); interval 3 with two pores behind middle and at three-fourths on left elytron, without pore on right elytron. Hind tarsi with segment 1 one and four-sevenths times as long as segment 2, segment 5 shorter than in ♂, segment 5/segment 1=1.11 (♀). L/W of metepisterna 1.80.



Figs. 1, 2. Left styluses of two spp. of Harpalini. 1. *Hyparpalus formosanus* JEDLIČKA. 2. *Oxycentrus changi* HABU.

Styluses (Fig. 2) distinctly different from those of *argutoroides*, basal segment with two long setae at apical area, apical segment strikingly curved and crescent-shaped, narrow, outer part of base prolonged posterolaterally, ventral outer margin with one very short spine at about basal one-third; hemisternites rather short, fully distant from base of apical segment of styluses, with two rather long setae at apex.

Distribution. Japan: Ryukyus—Iriomote Is. (Ôhara, V. 10, 1977, K. TERADA leg.). Formosa.

Remarks. The number of the pores of the third elytral interval is utterly unstable as indicated below:

holotype from Formosa		paratype from Formosa		♀ from Iriomote Is.	
left	right	left	right	left	right
3	4 or 3	1	1	2	0

Key to *Oxycentrus* species of Japan

1. Pronotum with basal angles obtusely angulate; clypeus with extension of frontal impressions reaching clypeal setae; elytral interval

3 with one pore; hind tarsi with segment 1 one and two-thirds to one and nine-tenths times as long as segment 2, segment 5/segment 1=0.90–1.10, mean 1.01, in five ♂♂, 1.00–1.12, mean 1.04, in five ♀♀; apical segment of styluses moderately curved, rather wide ………………………………………………………… *O. argutoroides* (BATES)

— Pronotum with basal angles obtuse, fairly rounded; clypeus with extension of frontal impressions terminating inside clypeal setae; elytral interval 3 with one to four pores or without pore; hind tarsi with segment 1 one and four-sevenths times as long as segment 2, segment 5/segment 1=1.26, 1.28 in ♂, 1.11 in ♀; styluses strikingly curved, crescent-shaped, narrow………………………… *O. changi* HABU

PANAGAEINI

Dischissus tibialis ANDREWES

"Ashiguro-yotsuboshi-gomimushi"

Dischissus notulatus FABRICIUS var. *tibialis* ANDREWES, 1933, Trans. Roy. Ent. Soc. Lond., 81: 5 (without locality indication).

Dischissus tibialis ANDREWES: HABU, 1961, Nature and Life in Southeast Asia, 1: 293, fig. 19.

Dischissus notulatus FABRICIUS var. *tibialis* ANDREWES: JEDLIČKA, 1965, Annot. Zool. Bot., Bratislava, 12: 8.

1 ex., V. 10, 1977, Ôhara, Iriomote Is., K. TERADA leg. So far the northeastern limit was Formosa (Tachen, Y. MIYAKE leg.). This species is easily distinguishable from *D. japonicus* ANDREWES by the dark tibiae and tarsi.

HEXAGONIINI

When I wrote Fauna Japonica, Carabidae, Truncatipennes-group in 1967, *Hexagonia insignis* (BATES) was the only representative of the tribe Hexagoniini in Japan. Later, in 1975, I recorded and redescribed *H. cyclops* (MATSUMURA) from Ishigaki Is., Ryukyus (HABU, 1975, Trans. Shikoku Ent. Soc., 12: 78–80, figs, 17, 18, 19). Here I add the third species of *Hexagonia* to the fauna of Japan; it is *H. sauteri* DUPUIS finely illustrated in the colour plate by DUPUIS (1913), but the figure appears to be wider than the real thing.

Hexagonia sauteri DUPUIS

"Chairo-hiranaga-gomimushi"

Hexagonia sauteri DUPUIS, 1912, Ann. Soc. Ent. Belg., 56: 308–312 (Formosa: "Kankan").

Hexagonia Sauteri DUPUIS: DUPUIS, 1913, Gen. Ins., Col. Adeph., Carab., Hexagoninae, fasc. 147: 3, pl.-figs. 1, 3, 4, 5, 6, 7.

Description. Length 8.7 mm. Width 2.9 mm. Body fully flattened and thin in lateral view.

Dark brown, somewhat reddish, shiny, pronotum a little less dark, elytra almost black at apical area; palpi light reddish brown, antennae dark reddish brown, segment 1 black, lateral margin of elytra rather pale, tarsi somewhat pale at apical two segments; ventral side dark reddish brown, but less dark than dorsal side.

Head (Fig. 4) fully wider than in *insignis* and *cyclops*, one and two-fifths times as wide (including eyes) as long (from apex of clypeus to neck-constriction), flatter than in two Japanese species, not punctate, frons with three distinct transverse-oblique rugae or sulci behind fronto-clypeal suture on either side, with one small shallow longitudinal depression at middle between eyes, wider, somewhat deep depression on either side between eyes, wider depressions reaching frontal impressions; microsculpture absent; tempora shorter than eyes, parallel behind eyes; posterior supraorbital setae a little less distant from eyes than from neck-constriction (fully more distant from eyes than from neck-constriction in *insignis* and *cyclops*); eyes fully convex, rather hemispheric, WH/WF 1.57 in one ♀; frontal lateral furrows deep, curved inward just behind eyes, reaching posterior supraorbital setae; frontal impressions somewhat deep, diverging, effaced at level of front margin of eyes or fused into depressions; labrum well emarginate at apex, right apical angle more protrudent than left angle; antennae a little extending beyond middle of pronotum, segment 2 without verticillate setae at apex; tooth of mentum narrowly emarginate at apex forming two small blunt dents.

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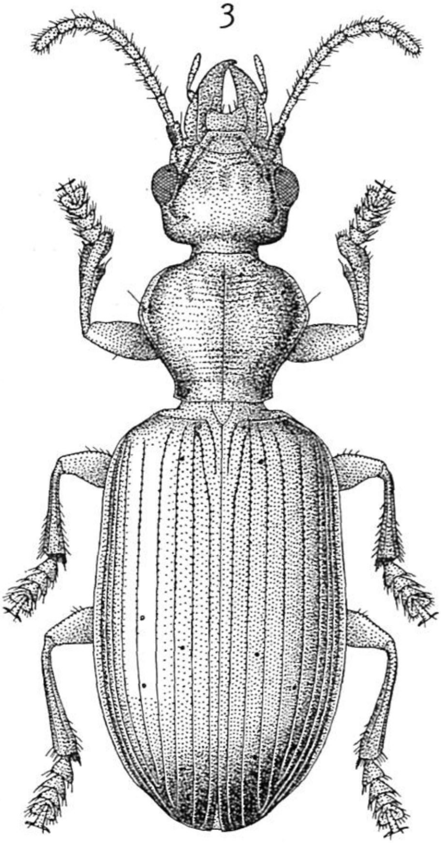
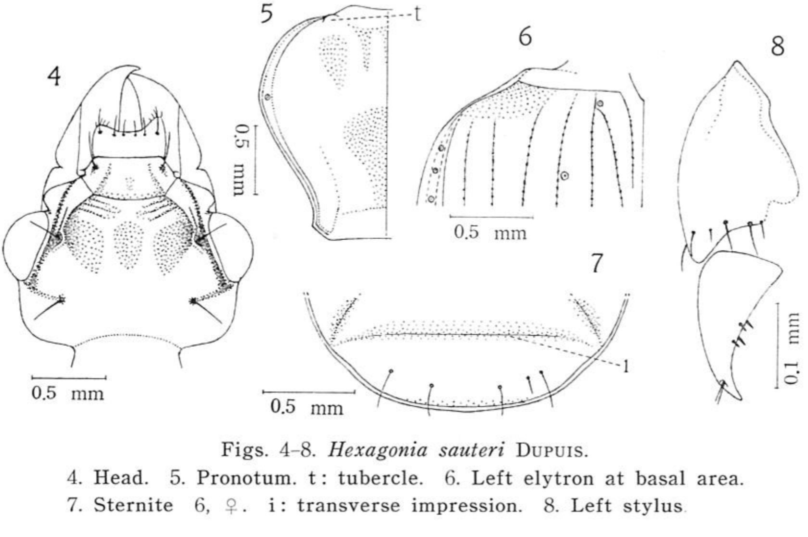


Fig. 3. *Hexagonia sauteri* Dupuis, ♀.

Pronotum (Fig. 5) hardly convex, cordate, widest at two-fifths, one and one-eighth times as wide as head, one and one-seventh times as wide as long (WP/WH 1.13, WP/LP 1.14, WP/WBP 1.74, in one ♀); surface distinctly (less distinctly at central area), transversely rugose, not punctate, with two pairs of longitudinal depressions at apical two-fifths (outer depressions a little wider and deeper than inner depressions), with one large deeper depression behind middle over median line; microsculpture absent; apical pedunculate part shallowly emarginate at middle, with one small tubercle (Fig. 5, t) at base on either side; apical angles not indicated but widely rounded; base almost even at median area, straightly, well oblique at lateral areas; basal angles obtuse but distinct, not dull at apex (right basal angle with small tooth protrudent laterally in single ♀); lateral margins well bordered at posterior three-fifths, dully, somewhat angulate at greatest width, weakly roundly, fairly contracted anteriorly, evenly, fully contracted posteriorly, distinctly sinuate before basal angles, thence a little diverging up to basal angles; lateral setae at two-fifths; lateral furrows well separating convex part from apical to lateral margins near apical angles, dilated and less distinctly cut at greatest width, thence narrowed and well cut posteriorly; median line distinct, but narrower than in *insignis*; basal foveae distinct, somewhat deep, faintly extending forward up to behind middle parallel with lateral margins.

Wings developed. Elytra elliptic, completely flat or obscurely de-



Figs. 4–8. *Hexagonia sauteri* Dupuis.
4. Head. 5. Pronotum. t: tubercle. 6. Left elytron at basal area.
7. Sternite 6, ♀. i: transverse impression. 8. Left stylus.

pressed at central area, fairly depressed at humeral area (Fig. 6), widest at middle, one and one-half times as wide as pronotum (WE/WP 1.50 in one ♀), one and five-eighths times as long as wide; microsculpture distinct, isodiametric; basal border (Fig. 6) complete, level and linear, forming widely obtuse but distinct angle at shoulder; shoulder somewhat tumid; lateral margin slightly sinuate just behind shoulder, sinuate at basal one-fourth, thence a little dilated towards middle; apical sinuation shallow or faint; striae moderately deep, finely punctate, striae 1 and 2 united just behind basal pore, stria 4 curved inward at basal area, stria 5 straight, evanescent just behind humeral depression; scutellary striole long, deep; intervals completely flat, interval 5 dilated behind humeral depression, interval 3 with three pores at one-tenth, four-sevenths and five-sixths, first and third pores a little separated from stria 3, second pore between striae 2 and 3, interval 5 with one pore at two-thirds on right elytron, two pores at middle and two-thirds on left elytron in one ♀ examined, pore or pores a little separated from stria 5.

Tibiae stouter and tarsi wider than in *insignis* and *cyclops*; claws without projecting tooth at middle.

Ventral side not punctate, head distinctly, transversely rugose; sternite 6 (Fig. 7) with long deep transverse impression at about two-thirds from apex besides lateral curved oblique impressions.

Styluses (Fig. 8) narrower than in *insignis* and *cyclops*, basal segment with five or six moderately long and thin setae at apical area, apical segment fairly curved at subapical area, rather tapering at apical area, more than twice as long as wide at base, with four or five short and narrow spines on and near ventral outer margin at about middle, subapical foramen opened fully more apically than in two Japanese spp.

Distribution. Japan: Ryukyus—Iriomote Is. (Ôhara, V. 10, 1977, K. TERADA leg.). Formosa.

Key to *Hexagonia* species of Japan

1. Elytra not so long, fully less than twice as long as wide; dark brown, somewhat reddish, elytra almost black at apical area; pronotum and ventral side not punctate; basal border of elytra complete ………… *H. sauteri* DUPUIS

— Elytra long and narrow, more than twice as long as wide; elytra yellowish or reddish brown to brownish yellow, with apical or subapical patch; pronotum and ventral side with large punctures; basal border of elytra interrupted at base of interval 3 ………… 2

2. Head and pronotum dark reddish brown to reddish black, elytral black patch generally reaching apex, sometimes isolated, ventral

side generally reddish black; elytra weakly convex, intervals somewhat convex ………………………………………… *H. insignis* (BATES)

— Head and pronotum reddish brown, elytral black patch smaller, isolated, ventral side reddish brown or yellowish brown; elytra flat, intervals flat ………………………………… *H. cyclops* (MATSUMURA)

PENTAGONICINI

Pentagonica kyushuensis HABU

Pentagonica kyushuensis HABU, 1967, Fauna Japonica (Ins. Col.), Carab., Truncatipennes-group: 43, 48–50, figs. 98, 109, pl. 1, fig. 4 (Japan: Ohata-ike, Miyazaki Pref.).

There is in TERADA's collection one female specimen of this rare species described from a single male specimen.

Supplemental description. Length 4.6 mm (from apex of mandible to apex of elytron). Width 2.1 mm. WH/WF 1.85, WP/WH 1.23, WP/LP 1.83, WE/WP 1.74. Elytra one and three-eighths times as long as wide. Basal segment of styluses (Fig. 9) wide, wider and with several fully long setae at apical area, apical segment very slightly curved, with some rather short spines or spinous setae at apical area.

Distribution. Japan: Kyushu; Ryukyus—Ishigaki Is. (after SHIBATA[1]); Iriomote Is. (Ôhara, V. 10, 1977, K. TERADA leg.).

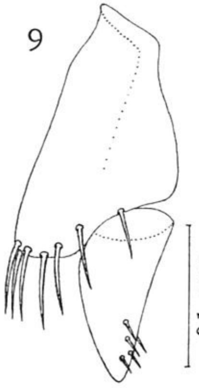


Fig. 9. Left stylus of *Pentagonica kyushuensis* HABU.

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[1] SHIBATA, 1969, Ent. Rev. Japan, 22: 54.

New Species and Subspecies of Lepturine Genus *Pidonia* MULSANT from Japan (Coleoptera; Cerambycidae)

By KOZO MIZUNO

At the beginning of this paper, I wish to express my hearty thanks to Prof. Dr. M. HAYASHI, whose great works on Genus *Pidonia* led me to find out the following new species, and who kindly suggested me the format of the description.

Pidonia hylophila KUBOKI subsp. *ohdaisana* nov.

This new subspecies is closely allied to the original one, but may be distinguished in male sex from the latter in the following characters :—

Sutural vitta notable (instead of being almost invisible(and broadened behind scutellum, latero-posterior markings very much developed transversely and almost forming a preapical band (instead of elliptical markings smaller than latero-median ones), elytral yellowish coloring more testaceous at base (than so in typical subspecies).

Length : 5.6–7.5 mm (male), 7.3–7.7 mm (female). Width : 1.7–2.3 mm (male), 2.1–2.6 mm (female).

Holotype : ♂, allotopotype : ♀ (in copula with holotype), 3. VII, 1977, Mt. Ohdaigahara (1500 m in alt.), Nara Pref., K. MIZUNO leg. Paratypes : 1♀, 28. VII, 1969 ; 1♂, 1♀, 7–8. VII, 1973 ; 2♀♀, 15–16. VI, 1974 ; 2♂♂, 3♀♀, 29. VI, 1975 ; 4♂♂, 2♀♀, 19. VI, 1977 ; 1♂, 3. VII, 1977, Mt. Ohdaigahara, Nara Pref., K. MIZUNO leg. (in the coll. MIZUNO).

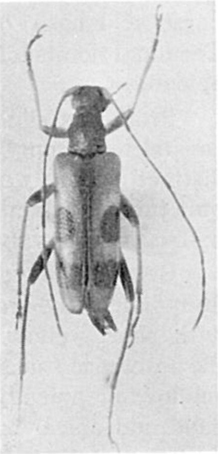


Fig. 1. *Pidonia hylophila ohdaisana* subsp. nov., ♂.

Male of this new subspecies closely similar to *Pidonia miwai* in elytral markings and coloration, but may be distinguished by careful comparison and more easily by its characteristic male genital organ. Female that cannot be distinguished obviously from original subspecies, has the quite different elytral markings from those of *P. miwai*.

Pidonia tsukamotoi sp. nov.

(Japanese name : Takane-hime-hana-kamikiri)

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 39–41, pl. 1, Dec., 1978〕

Male: length 7.0 mm, width 1.7 mm; body minute, slender, somewhat depressed, brown; head, antennae, prothorax, scutellum, legs and body beneath chestnut brown; labrum, gula, basal joints of maxillary and labial palpi, coxae, basal halves of femora, middle of abdominal segments and frontal margin of prothorax yellowish pale brown; elytra pale yellow with brown markings.

Female: length 6.2 mm, width 1.7 mm; body more round and darker than male; head, antennae, prothorax, scutellum, legs and body beneath blackish brown; basal joints of both palpi, coxae and basal halves of femora yellowish pale brown; elytra pale yellow with dark brown markings.

Head (including eyes) broader than prothorax, distinctly narrowed posteriorly behind eyes to dully angulate tempora; vertex and occiput finely closely and shallowly punctured with a shallow median longitudinal furrow forward to frons, punctures relating one another irregularly to fine wrinkles on vertex. Antennae slightly longer than body; comparative length of each antennal joint as follows:— $5>3=1+2>4$. Terminal joints of maxillary palpi slender, not so strongly broadened apically.

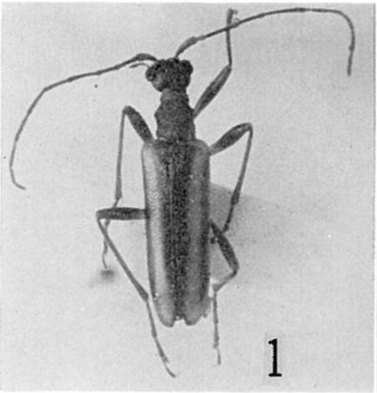
Prothorax slightly longer than wide, broadest just before the middle, constricted strongly before base and more strongly so behind apex; sides distinctly sharply angulate; disc rather flat, finely closely and uniformly punctured with a vague fine median longitudinal line of which apical half is almost vanished in female; base bisinuate weakly.

Elytra pale yellow, somewhat depressed; sides subparallel; apices dully narrowly transversely truncate; disc sparsely uniformly clothed with short yellow pubescence, coarsely punctured on basal two-thirds, the interspace nearly equal to puncture itself, then punctures gradually shallowing apically on the rest; elytral markings as follows:— basal band and apical band lacking; sutural vitta broadened basally including scutellum, triangularly tapering off apically and just arriving to the apex of suture; humeral, latero-basal, -median and -posterior markings related each other to form broad submarginal vittae which are not reached to the apices. In female, lateral submarginal vittae seem to be fused with sutural vitta at humeri, because of the darkened elytral coloration.

Apex of the fifth abdominal segment weakly bisinuate, faintly concave in the middle.

Holotype: ♂, allotype: ♀, 18. VII, 1957. Mt. Senjyo, Nagano Pref., K. TSUKAMOTO leg. (in the coll. KISHII).

This new species is distinguishable from all other known species by its characteristic elytral markings and its minute, slender body. Sexual dimorphism is not so distinct in this species. Among the species of *Pidonia* from Japan, so far as I have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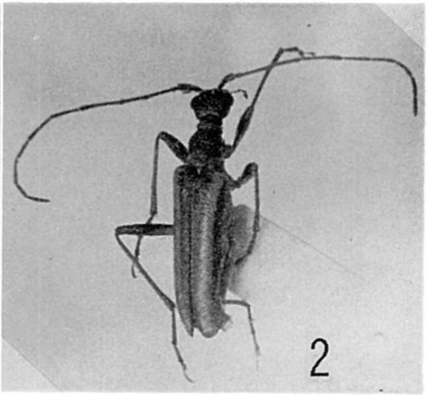
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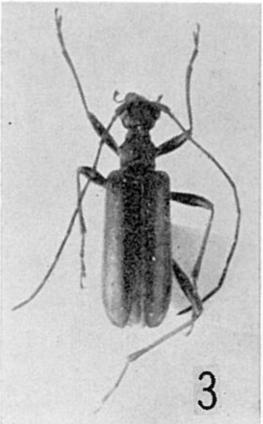
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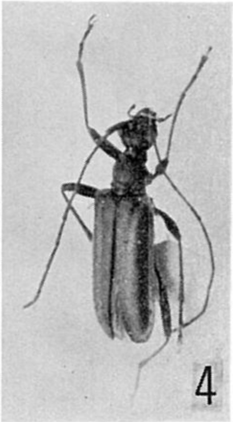
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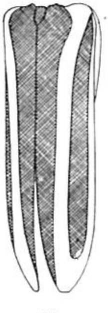
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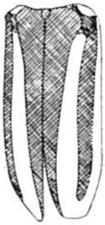
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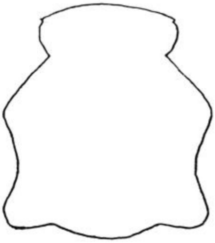
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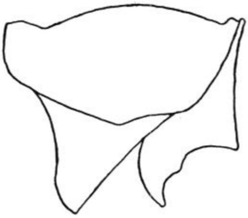
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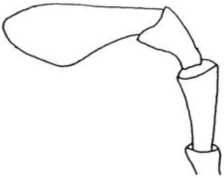
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(K. Mizuno photo. & del.)

examined, the shape of the prothorax of this new species resembles only that of *signata*. Compared with *signata*, this new species shows following three morphological resemblance— a) the shape of apex of the fifth abdominal segment, b) terminal joints of maxillary palpi, c) elytral markings' tendencies *i.e.* apical band lacking, sutural vitta broadened basally and tapering apically.

Considering the fact that this new species was collected from alpine zone of Mt. Senjyo in South Japanese Alps and *signata* is known to have the most isolated and vertically high distribution pattern and morphologically peculiar structural features quite separated from the others, both species presumably compose a subgroup which has the highest vertical distribution pattern.

This new species is named in honour of Mr. K. TSUKAMOTO, the collector, who is a famous entomologist and alpinist.

I wish to express my cordial thanks to Mr. T. KISHII who kindly gave me the opportunity to describe this interesting new species.

Explanation of Plate 1.

Fig. 1, 2. *Pidonia tsukamotoi* sp. nov., ♂ (Holotype).
3, 4. ditto, ♀ (Allotype).
5, 6. Elytral markings of *P. tsukamotoi* (5, ♂; 6, ♀).
7, 8. Outlines of the prothorax of *P. tsukamotoi*, ♂ (7, dorsal view; 8, lateral view).
9. Maxillary palpus of *P. tsukamotoi*, ♂.

Chrysomelidae (Coleoptera) of Korea Preserved in the Hungarian Natural History Museum, Budapest

By VASSIL TOMOV

University of Plovdiv, Bulgaria

Thanks to the kindness of Dr. Z. KASZAB, I had a possibility to study the materials of Synetinae, Criocerinae, Clytrinae, Cryptocephalinae and Galerucinae, collected by Dr. S. MAHUNKA and Dr. H. STEINMANN in 1970 and by Dr. S. HORVATOVICH and Dr. J. PAPP in 1971 in Korea. This material contains 214 specimens, respective 19 genera and 24 species. One subfamily, one genus, three species and one subspecies are for the first time registered to the Korean fauna.

Subfamily **Synetinae**

Syneta adamsi BALY

Syneta adamsi BALY, 1877, Ann. Mag. Nat. Hist., ser. 4, 20: 378.

Known from: NE China (Manchuria), E Siberia, Japan (GRESSITT & KIMOTO, 1961).

Material examined: Prov. Kanwon, Kum-gang san, Man-mul san, 30. V. 1970, 1 ex. (no. 66).

This subfamily is new to the fauna of Korea, so the total number of the known subfamilies of the Korean Chrysomelids now is fifteen.

Subfamily **Criocerinae**

Lema (*Microlema*) *decempunctata* GEBLER

Lema 10-punctata GEBLER, 1830, Ledeb. Reise, 2: 196.

Known from: E Siberia, Japan, China, Mongolia, Korea (GRESSITT & KIMOTO, 1961; JOLIVET, 1973).

Material examined: Prov. South Phenan, Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, 6 exs. (no. 19).

Lema (*Lema*) *concinnipennis* BALY

Lema concinnipennis BALY, 1865, Ann. Mag. Nat. Hist., ser. 3, 16: 157.

Known from: China, Korea, Japan (GRESSITT & KIMOTO, 1961; JOLIVET, 1974).

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 43–48, Dec., 1978〕

Material examined: Prov. Kanwon, Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, 1 ex. (no. 69); Prov. Kengi, Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, 2 exs. (no. 104) and San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, 4 exs. (no. 112).

Lema (*Lema*) *diversa* BALY

Lema diversa BALY, 1873, Trans. Ent. Soc. Lond.: 71.

Known from: China, Korea, Japan (GRESSITT & KIMOTO, 1961; JOLIVET, 1974).

Material examined: Prov. Kengi, Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, 1 ex. (no. 104).

Oulema oryzae (KUWAYAMA)

Lema oryzae KUWAYAMA, 1931, Ins. Matsumurana, 5 (3): 115.

Known from: Japan, China, Korea, Taiwan (GRESSITT & KIMOTO, 1961, 1963 a).

Material examined: Prov. South Phenan, Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, 3 exs. (no. 19); Prov. Kanwon, Kum-gang san, Sam-il po, 1. VI. 1970, 8 exs. (no. 87).

Subfamily **Clytrinae**

Smaragdina obscuripes (WEISE)

Gynandrophthalma obscuripes WEISE, 1887, Arch. Naturg., 53 (1): 165.

Known from: E Siberia, NE China (Kirin) (GRESSITT & KIMOTO, 1961).

Material examined: Prov. Kanwon, Kum-gang san, Man-mul san, 30. V. 1970, 1 ex. (no. 66).

This species is recorded for the first time from Korea.

Subfamily **Cryptocephalinae**

Cryptocephalus koltzei WEISE

Cryptocephalus koltzei WEISE, 1887, Arch. Naturg., 53 (1): 171.

Known from: Siberia, China, Korea (GRESSITT & KIMOTO, 1961; KIMOTO & KAWASE, 1966).

Material examined: Prov. Kanwon, Kum-gang san, environs of Hotel Go-song, 29. V. 1970, 2 exs. (no. 52); Prov. Kengi, Bagyon san: Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, 1 ex. (no. 99), near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, 1 ex. (no. 104), San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, 1 ex. (no. 113).

Cryptocephalus discretus BALY

Cryptocephalus discretus BALY, 1873, Trans. Ent. Soc. Lond.: 97.

Known from: Japan, Tsushima, E Siberia, N China, Korea (GRESSITT & KIMOTO, 1961).

Material examined: Prov. Kanwon, Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, 1 ex. (no. 69).

Subfamily **Galerucinae**

Galeruca dahli vicina (SOLSKY)

Adimonia vicina SOLSKY, 1872, Horae Soc. Ent. Ross., 8: 255.

Known from: SE Siberia, N China (Kirin, Jehol), Korea (GRESSITT & KIMOTO, 1963).

Material examined: Prov. Ryang-gang, Plateau Chann-Pay, Sam-zi-yan, 1700 m, 27. VIII. 1971, 1 ex. (no. 206).

Galeruca tanaceti incisicollis MOTSCHULSKY

Galeruca incisicollis MOTSCHULSKY, 1860 Schrenck's Reisen Amurl.: 232.

Known from: E Siberia, Kamtschatka, NW China, Mongolia (GRESSITT & KIMOTO, 1963).

Material examined: Prov. Ryang-gang, Plateau Chann-Pay, Sam-zi-yan, 1600 m, 25. VIII. 1971, 1 ex. (no. 197).

This subspecies is recorded for the first time from Korea.

Lochmaea capreae (LINNAEUS)

Chrysomela capreae LINNAEUS, 1758, Syst. Nat., ed. 10: 376.

Known from: Europe, Siberia, NE China (Manchuria), Korea, Japan (GRESSITT & KIMOTO, 1963; KIMOTO & KAWASE, 1966).

Material examined: Prov. Kanwon, Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, 1 ex. (no. 69); Prov. Kengi, Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, 1 ex. (no. 112); Prov. Kaesong, Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, 1 ex. (no. 261).

Apophylia flavovirens (FAIRMAIRE) (Fig. 1)

Malaxia flavovirens FAIRMAIRE, 1878, Ann. Soc. Ent. France, ser. 5, 8: 139.

Known from: China, Hainan Is., Korea (GRESSITT & KIMOTO, 1963).

Material examined: Prov. South Pyongan, Bongwa-ri, 45 km E from Pyongyan, 16. VIII. 1971, 5 exs. (no. 178).

Pyrrhalta annulicornis (BALY)

Galeruca annulicornis BALY, 1874, Trans. Ent. Soc. Lond.: 177.

Known from: Japan, NE China, SE Siberia, Korea (GRESSITT & KIMOTO, 1963; JOLIVET, 1974).

Material examined: Prov. Kaesong, Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, 3 exs. (no. 261).

Galerucella grisescens (Joannis)

Galeruca grisescens Joannis, 1866, Abeille, 3: 98.

Known from: Europe, Siberia, China, Korea, Japan, Sachalin, Vietnam, Taiwan (Gressitt & Kimoto, 1963, 1963 a; Kimoto & Kawase, 1966; Jolivet, 1974).

Material examined: Prov. South Pyongan, Pyongyan, Hotel garden and city park, 3. VIII.–1. IX. 1971: 2 exs. (no. 136), 8 exs. (no. 137), 4 exs. (no. 138), 4 exs. (no. 141), 6 exs. (no. 143), 1 ex. (no. 144), 2 exs. (no. 150), 1 ex. (no. 156), 13 exs. (no. 157), 6 exs. (no. 162), 7 exs. (no. 166), 7 exs. (no. 167), 1 ex. (no. 176), 2 exs. (no. 177), 3 exs. (no. 185), 2 exs. (no. 225), 3 exs. (no. 227), De-sang san, 12 km NE from Pyongyan, 7. VIII. 1971, 26 exs. (no. 145) and 2 exs. (no. 146), Sa-gam, 45 km N from Pyongyan, 12. VIII. 1971, 4 exs. (no. 163) and 12 exs. (no. 164), Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, 3 exs. (no. 169), Pyongyan, Nung-ra do (island), 14. VIII. 1971, 1 ex. (no. 175) and 17. VIII. 1971, 3 exs. (no. 182), Lyong-ak san, 25 km W from Pyongyan, 31. VIII. 1971, 1 ex. (no. 224); Prov. Ryang-gang, Plateau Chann-Pay, Sam-zi-yan, 1600 m, 25. VIII. 1971, 1 ex. (no. 197); Prov. Kaesong, Mts. Pakyon, Pakyon popo, 27 km NE from Kaesong, 8. IX. 1971, 1 ex. (no. 245).

Fleutiauxia armata (Baly)

Aenidia armata Baly, 1874, Trans. Ent. Soc. Lond.: 179.

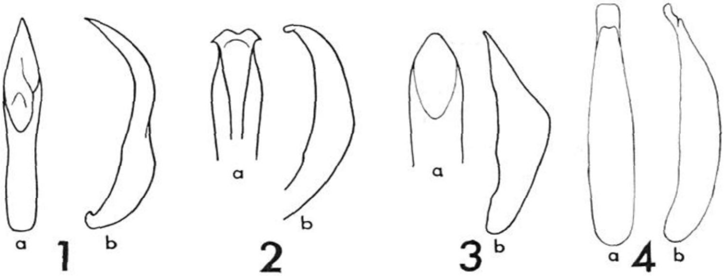
Known from: Japan, E Siberia, Korea, NE China (Gressitt & Kimoto, 1963).

Material examined: Prov. Kengi, Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, 7 exs. (no. 99).

Luperus semiflavus Ogloblin (Fig. 2)

Luperus (*Luperus*) *semiflavus* Ogloblin, 1936, Fauna USSR, 26, 1: 294, 427.

Known from: NE China (Manchuria), Korea (Gressitt & Kimoto, 1963, 1963 a).



Figs. 1–4. Male genitalia. a, dorsal view; b, lateral view. 1. *Apophylia flavovirens* (Fairmaire) from Korea (South Pyongan). 2. *Luperus semiflavus* Ogloblin from Korea (South Phenan). 3. *Exosoma minuta* (Joannis) from Korea (Kengi). 4. *Monolepta pallidula* (Baly) from Korea (South Pyongan).

Material examined: Prov. South Phenan, Pyongyang, Nung-ra do, island in the river Te-dong, 27. V. 1970, 5 exs. (no. 36).

Agelastica coerulea BALY

Agelastica coerulea BALY, 1874, Trans. Ent. Soc. Lond.: 188.

Known from: Japan, Korea, NE China (Manchuria), E Siberia, N America (GRESSITT & KIMOTO, 1963; KIMOTO & KAWASE, 1966).

Material examined: Prov. Kengi, Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, 3 exs. (no. 112).

Exosoma minuta (JOANNIS) (Fig. 3)

Luperus minutus JOANNIS, 1866, Abeille, 3: 117, 136.

Known from: SE Siberia, NE China (Manchuria), Korea (GRESSITT & KIMOTO, 1963).

Material examined: Prov. Kanwon, Kum-gang san, Guriong chon, 1. VI. 1970, 1 ex. (no. 82); Prov. Kengi, Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, 2 exs. (no. 99).

Stenoluperus nipponensis (LABOISSIÈRE)

Luperus nipponensis LABOISSIÈRE, 1913, Ann. Ass. Nat. Levallois-Perret: 67.

Known from: Japan, Korea, N and W China, E Siberia (GRESSITT & KIMOTO, 1963).

Material examined: Prov. Ryang-gang, Plateau Chann-Pay, Sam-zi-yan, 1700 m, 27. VIII. 1971, 1 ex. (no. 206).

Paraluperodes suturalis nigrobilineatus (MOTSCHULSKY)

Cnecodes nigro-bilineatus MOTSCHULSKY, 1860, Etud. Ent., 9: 26.

Known from: SE Siberia, N and C China, Korea, Tsushima, Japan (GRESSITT & KIMOTO, 1963).

Material examined: Prov. Kengi, Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, 1 ex. (no. 104); Prov. South Pyongan, Sa-gam, 45 km N from Pyongyan, 12. VIII. 1971, 3 exs. (no. 164), Pyongyan, Hotel garden, 12. VIII. 1971, 2 exs. (no. 167), Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, 1 ex. (no. 169), Bongwa-ri, 45 km E from Pyongyan, 16. VIII. 1971, 1 ex. (no. 179); Prov. Kaesong, Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, 1 ex. (no. 261).

Atrachya menetriesi (FALDERMANN)

Galeruca menetriesi FALDERMANN, 1835, Mem. Acad. Petersb., 2: 439.

Known from: Amur, Korea, China, Sachalin, Japan (GRESSITT & KIMOTO, 1963, 1963 a).

Material examined: Prov. Ryang-gang, Hyesan, Hotel garden, 23. VIII. 1971, 3 exs. (no. 194).

Monolepta hieroglyphica biarcuata WEISE

Monolepta biarcuata WEISE, 1889, Horae Soc. Ent. Ross., 23 : 569, 632.

Known from : Mongolia, China, Sumatra, Korea (GRESSITT & KIMOTO, 1963).

Material examined : Prov. South Pyongan, Sa-gam, 45 km N from Pyongyan, 12. VIII. 1971, 1 ex. (no. 164).

Monolepta pallidula (BALY) (Fig. 4)

Luperodes pallidulus BALY, 1874, Trans. Ent. Soc. Lond. : 187.

Known from : Japan, Ryukyu Is., China, Taiwan (GRESSITT & KIMOTO, 1963).

Material examined : Prov. South Pyongan, Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, 7 exs. (no. 169).

This species is recorded for the first time from Korea.

Agelasa nigriceps MOTSCHULSKY

Agelasa nigriceps MOTSCHULSKY, 1860, Etud. Ent., 9 : 25.

Known from : Japan, SE Siberia, NE China (Kirin), Korea (GRESSITT & KIMOTO, 1963).

Material examined : Prov. Kanwon, Kum-gang san, Guriong chon, 1. VI. 1970, 2 exs. (no. 82) ; Prov. Kengi, Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, 1 ex. (no. 99).

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Editor's note : Prov. South Phenan, Pyongyang, Bang-ha-ri used by MAHUNKA & STEINMANN in 1970 is same as Prov. South Pyongan, Pyongyan, Bangwa-ri used by HORVATOVICH & PAPP in 1971, respectively.

A Contribution to the Knowledge of the Korean Fauna of Chrysomelidae (Coleoptera)

By Blagoy Gruev

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This paper represents a list of 43 species of various Chrysomelidae (Subfamilies: Chlamisinae, Lamprosomatinae, Eumolpinae, Chrysomelinae, Alticinae, Hispinae, Cassidinae) from Korea. Eleven of them are herein newly recorded from this country.

I am greatly indebted to Dr. Z. Kaszab for loan of the undetermined Korean specimens from the Hungarian National Museum; to Dr. M. Josifov for giving me his specimens of two species collected by him in Korea; and to Prof. Dr. S. Kimoto who identified some of the specimens and confirmed the rightness of my determination of some others.

Abbreviations: B —Hungarian National Museum (Budapest); G —Collection of the author; HP —Leg. S. Horvatovich & J. Papp; HZE —Hungarian zoological expedition I in Korea; J —Leg. M. Josifov; M —Leg. M. Magyar; MS —Leg. S. Mahunka & H. Steinmann.

Subfamily **Chlamisinae**

Chlamisus pubiceps (Chûjô)

Exema pubiceps Chûjô, 1940, Trans. Nat. Hist. Soc. Formosa, 30 (205): 396.

Known from: Korea, NE China (Gressitt & Kimoto, 1961).

New material: Kanwon: Kum-gang san, environs of Hotel Go-song, 29. V. 1970, HZE, MS, 1 ex. (B) (det. S. Kimoto).

Subfamily **Lamprosomatinae**

Oomorphoides cupreatus (Baly)

Lamprosoma cupreatum Baly, 1873, Trans. Ent. Soc. Lond.: 82.

Known from: Japan, Ryukyu Is., Korea (Mt. Myoko) (Gressitt & Kimoto, 1961).

New material: Kengi: Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B) (det. S. Kimoto); Kanwon: Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, HZE, MS, 1 ex. (B).

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Oomorphoides nigrocoeruleus (BALY)

Lamprosoma nigrocoeruleum BALY, 1873, Trans. Ent. Soc. Lond.: 82.

Known from: Japan.

New material: Kanwon: Kum-gang san, Guriong chon, 1. VI. 1970, HZE, MS, 1 ex. (B) (det. S. KIMOTO). New to the Korean fauna.

Subfamily **Eumolpinae**

Basilepta fulvipes (MOTSCHULSKY)

Nodostoma fulvipes MOTSCHULSKY, 1860, Schrenk's Reisen Amurl., 2: 176.

Known from: Siberia, Mongolia, China, Korea (N Korea; Quelpart Is.), Japan (GRESSITT & KIMOTO, 1961; KIMOTO & KAWASE, 1966).

New material: Sujangsan bei Hedzu, 3. VIII. 1974, J, 1 ex. (G).

Pagria signata (MOTSCHULSKY)

Metachroma signata MOTSCHULSKY, 1858, Etud. Ent., 7: 110.

Known from: India, Burma, Tonkin, China, Siberia, Korea, Ryukyu Is., Taiwan, Philippines, E Indies (GRESSITT & KIMOTO, 1961).

New material: Kanwon: Kum-gang san, Sam-il po, 29. V. and 1. VI. 1970, HZE, MS, 25 exs. (B); Kanwon: Kum-gang san, environs of Hotel, 29. V. 1970, HZE, MS, 2 exs. (B); Kanwon: Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, HZE, MS, 11 exs. (B).

Aoria rufotestacea FAIRMAIRE (Fig. 1)

A. rufotestacea FAIRMAIRE, 1889, Ann. Soc. Ent. France, ser. 6, 9: 70.

Known from: S China.

New material: Kanwon: Kum-gang chon, upper reaches of brook below Hotel, 30. V. 1970, HZE, MS, 1 ex. (B) (confirmed S. KIMOTO). New to the Korean fauna.

Lypesthes ater (MOTSCHULSKY)

Fidia atra MOTSCHULSKY, 1860, Etud. Ent., 9: 22.

Known from: Japan, Korea (Keiki-Do; Heian-Hokudo), China (GRESSITT & KIMOTO, 1961).

New material: Bagjân, 20 km NO Kesông, 21–23. V. 1975, J, 1 ex., (G).

Colasposoma dauricum MANNERHEIM

C. dauricum MANNERHEIM, 1849, Bull. Mosc., 1: 247.

Known from: E Siberia, N China, Korea (Keiki-Do; Chemulpo, Pusan), Japan (GRESSITT & KIMOTO, 1961).

New material: Kengi: Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B) (det. S. KIMOTO).

Pachnephorus brettinghami Baly (Fig. 2)

P. brettinghami Baly, 1878, Jour. Linn. Soc. Lond., Zool., 14: 256.

Known from: S China, India, Burma, Sumatra (Gressitt & Kimoto, 1961).

New material: Dzikha-ri, südl. Chângdzin, 9. VI. 1975, J, 1 ex. (G) (det. S. Kimoto); South Phenan: Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, HZE, MS, 10 exs. (B). New to the Korean fauna.

Subfamily **Chrysomelinae**

Plagiodera versicolora (Laicharting)

Chrysomela versicolora Laicharting, 1781, Verz. Tirol. Ins., 1: 148.

Known from: Europe, N Africa, Siberia, China, Korea (Keisho-Hokudo; Dagelet, Dockdo), Japan, Taiwan, India (Gressitt & Kimoto, 1963; Jolivet, 1974).

New material: Kanwon: Kum-gang san, environs of Hotel Go-song, 29. V. 1970, HZE, MS, 1 ex. (B).

Chrysomela populi Linnaeus

C. populi Linnaeus, 1758, Syst. Nat., ed. 10: 370.

Known from: Europe, W Asia, Siberia, China, Korea (S Korea; Keisho-Hokudo; Suigen, Kim Hon-kyu, Chemulpo, Unggi), Japan, India (Gressitt & Kimoto, 1963; Kimoto & Kawase, 1966).

New material: Kengi: Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, HZE, MS, 1 ex. (B).

Chrysomela vigintipunctata (Scopoli)

Coccinella vigintipunctata Scopoli, 1763, Ent. Carn.: 78.

Known from: Europe, Siberia, Japan, Taiwan, China, Korea (Chemulpo, Suigen, Ôkaja) (Gressitt & Kimoto, 1963; Kimoto & Kawase, 1966).

New material: Kengi: Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, HZE, MS, 4 exs. (B); Kengi: Bagyon san, San-chon tong, about 20 km SE of Kaesong, 8. VI. 1970, HZE, MS, 12 exs. (B).

Linaeidea adamsi adamsi (Baly)

Melasoma Adamsi Baly, 1884, Trans. Ent. Soc. Lond., ser. 3, 2: 229.

Known from: China, Korea (Gressitt & Kimoto, 1963; Jolivet, 1973).

New material: Soktan, 5. VII. 1956, M, 1 ex. (B).

Subfamily **Alticinae**

Phyllotreta humilis Weise (Fig. 3)

P. humilis Weise, 1887, Arch. Naturg., 53: 198.

Known from: Siberia, China, Mongolia.

New material: South Pyongan: Pyongyan, Hotel garden, 10. VIII. 1971, HP, 2 exs. (B). New to the Korean fauna.

Aedeagus (Fig. 3 a, b; original drawing) long, narrow, collateral, acuminate at apex; ventral surface smooth, convex.

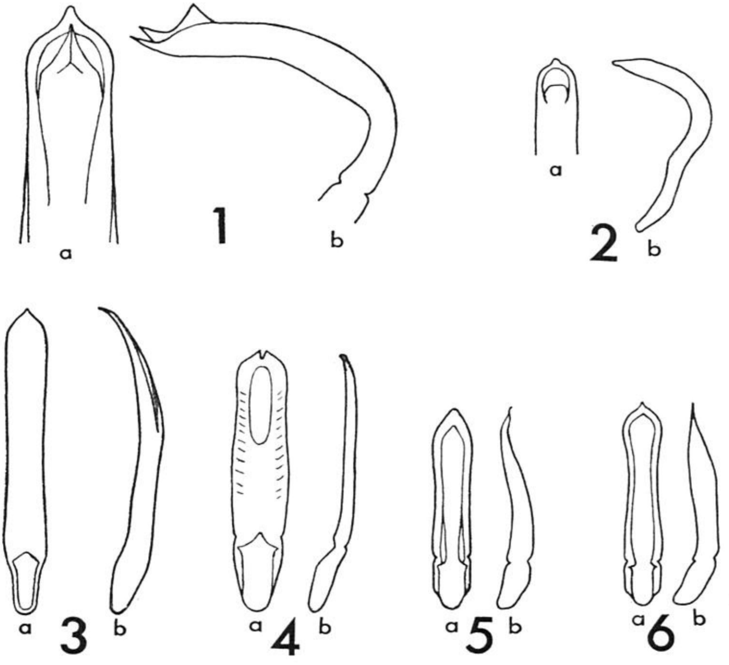
Phyllotreta vittula (REDTENBACHER)

Haltica vittula REDTENBACHER, 1849, Fauna Austriaca: 531.

Known from: Europe, N Africa, Caucasus, Siberia, China, Korea (N Korea; Phjŏngjang, Purjŏng, Čhŏngdžin-si, Hamgjŏng-namdo) (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969; GRUEV, 1977).

New material: South Pyongan: Lyong-ak san, 25 km W from Pyongyan, 9. VIII. 1971, HP, 1 ex. (B).

Phyllotreta rectilineacta CHEN (Fig. 4)



Figs. 1–6. Aedeagus. 1a–2a, Dorsal view; 3a–6a, Ventral view; b, Lateral view.
1. *Aoria rufotestacea* FAIRMAIRE. 2. *Pachnephorus brettinghami* BALY.
3. *Phyllotreta humilis* WEISE. 4. *Phyllotreta rectilineata* CHEN.
5. *Longitarsus scutellaris* (REY). 6. *Longitarsus nasturtii* (FABRICIUS).

P. rectilineata CHEN, 1939, Sinensia, 10 (1-6): 50.

Known from: Siberia, S China, Japan, N Vietnam.

New material: Kanwon: Kum-gang san, environs of Hotel Go-song, 29. V. 1970. HZE, MS, 2 exs. (B). Aedeagus examined. New to the Korean fauna.

Phyllotreta koltzei WEISE

P. koltzei WEISE, 1887, Arch. Naturg., 53: 197.

Known from: E Siberia (Ussuri).

New material: Kengi: Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B). New to the Korean fauna.

Phyllotreta vittata (FABRICIUS)

Crioceris vittata FABRICIUS, 1801, Syst. El., 1: 469.

Known from: Holarctica, China, Hainan Is., Korea (N Korea; Sunan, Samsŏk, Purjŏng, Kjŏngsŏng, Hamdžu, Hjangsan, Paldang-Seoul, Sujangsan), Ryukyu Is., Taiwan, Vietnam, Siam, Sumatra (HEIKERTINGER, 1941; GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969; JOLIVET, 1974; GRUEV, 1977).

New material: South Pyongan: Pyongyan, Hotel garden, 3-6., 10., 12., 17. VIII. and 1. IX. 1971, HP, 47 exs. (B); South Pyongan: Pyongyan, Nung-ra do (island), 17. VIII. 1971, HP, 7 exs. (B); South Pyongan: Bongwa-ri, 45 km E from Pyongyan, 16. VIII. 1971, HP, 1 ex. (B); South Phenan: Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, HZE, MS, 59 exs. (B); South Phenan: Sa-gam po, 30 km N from Pyongyang, 24. V. 1970, HZE, MS, 5 exs. (B); Kengi: Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, HZE, MS, 2 exs. (B); Kengi: Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B); Kanwon: Wonsan, seashore, 28. V. 1970, HZE, MS, 1 ex. (B).

Aphthona modesta WEISE

A. modesta WEISE, 1887, Arch. Naturg., 53: 200.

Known from: E Siberia, S Manchuria, Korea (Quelpart Is., Kymgang-san), Tibet (HEIKERTINGER, 1944; GRUEV, 1977).

New material: Kanwon: Kum-gang san, Man-mul san, 30. V. 1970, HZE, MS, 12 exs. (B); Kanwon: Kum-gang san, Guriong chon. 1. VI. 1970, HZE, MS, 3 exs. (B); Kengi: Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, HZE, MS, 4 exs. (B); Kengi: Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, HZE, MS, 1 ex. (B); South Pyongan: Pyongyan, Hotel garden, 6-7. IX. 1971, HP, 1 ex. (B); Kaesong: Mts. Pakyon, Pakyon popo, 27 km NE from Kaesong, 8. IX. 1971, HP, 1 ex. (B). Aedeagus examined.

Longitarsus succineus (FOUDRAS)

Teinodactyla succineus FOUDRAS, 1860, Ann. Soc. Linn. Lyon (n.s.), 6: 240, 330.

Known from: Europe, Caucasus, Asia Minor, C Asia, Siberia, Korea (Phjŏngjang, Mjohjang-san, Onpho-ri, Djuyr near Čhŏngdžin, Jŏnpong-ri, Bakjŏng, Dockdo Is.), Japan (Heikertinger & Csiki, 1940; Warchalowski, 1969; Jolivet, 1974).

New material: South Pyongan: Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, HP, 2 exs. (B).

Longitarsus scutellaris (Rey) (Fig. 5)

Thyamis scutellaris Rey, 1873, In Muls. & Rey, Ann. Soc. Linn. Lyon (n. s.), 20: 231.

Known from: Europe, Siberia, Saghalien, Mongolia, China, Japan, N Vietnam.

New material: South Pyongan: Pyongyan, city park, 4., 6. VIII. and 1. IX. 1971, HP, 18 exs. (B); South Pyongan: Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, HP, 2 exs. (B); South Pyongan: De-sang san, 12 km NE of Pyongyan, 7. VIII. 1971, HP, 5 exs. (B). Aedeagus examined. New to the Korean fauna.

Longitarsus nasturtii (Fabricius) (Fig. 6)

Galeruca nasturtii Fabricius, 1792, Ent. Syst., 1, 2: 31.

Known from: Europe, C Asia, Tibet, E Siberia.

New material: Pyongan: Pyongyan, Hotel garden, 6. VIII. and 1. IX. 1971, HP, 3 exs. (B); South Pyongan: Lyong-ak san, 25 km W from Pyongyan, 9–10. VIII. 1971, HP, 2 exs. (B); South Pyongan: De-sang san, 12 km NE from Pyongyan, 7. VIII. 1971, HP, 1 ex. (B); South Pyongan: Mang-yong dae, 5. VIII. 1971, HP, 1 ex. (B). Aedeagus examined. New to the Korean fauna.

Longitarsus godmani (Baly)

Thyamis godmani Baly, 1876, Trans. Ent. Soc. Lond.: 583.

Known from: China, N Vietnam, Korea (Phjŏngjang, Hjangam-ri) (Gressitt & Kimoto, 1963; Warchalowski, 1970).

New material: South Pyongan: Pyongyan, Hotel garden, 6. VIII. and 1. IX. 1971, HP, 2 exs. (B); South Pyongan: De-sang san, 12 km NE from Pyongyan, 7–8. VIII. 1971, HP, 2 exs. (B); South Phenan: Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, HZE, MS, 1 ex. (B). Aedeagus examined.

Hemipyxis plagioderoides (Motschulsky)

Oedionichis? *plagioderoides* Motschulsky, 1850, Etud. Ent., 9: 27.

Known from: Burma, China, N Vietnam, E Siberia, Korea, Japan (Gressitt & Kimoto, 1963 a).

New material: Kanwon: Kum-gang san, Man-mul san, 30. V. 1970, HZE, MS, 1 ex. (B); Kanwon: Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, HZE, MS, 1 ex. (B); Kengi: Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B).

Altica tamaricis weisei (Jacobson)

Haltica laeviuscula WEISE, 1889 (nec HAROLD, 1875), Horae Soc. Ent. Ross., 23 : 634.
Haltica Weisei JACOBSON, 1892, Ibid., 26 : 463 (new name for *H. laeviuscula* WEISE, 1889).

Known from : Mongolia, W China, Korea (GRESSITT & KIMOTO, 1963).

New material : Kanwon : Kum-gang san, environs of Hotel Go-song, 29. V. 1970, HZE, MS, 3 exs. (B) ; Kanwon : Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, HZE, MS, 2 exs. (B) ; Kengi : Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, HZE, MS, 3 exs. (B) ; South Pyongan : Sa-gam, 45 km N from Pyongyan, 12. VIII. 1971, HP, 5 exs. (B) (confirmed S. KIMOTO).

Altica oleracea (LINNAEUS)

Chrysomela oleracea LINNAEUS, 1758, Syst. Nat., ed. 10 : 372.

Known from : Palearctica. (Korea : Čhŏnne, Sangvŏn-am) (WARCHALOWSKI, 1969).

New material : Kaesong : Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, HP, 5 exs. (B). Aedeagus examined.

Altica caerulescens (BALY)

Graptodera caerulescens BALY, 1874, Trans. Ent. Soc. Lond. : 190.

Known from : Japan, S China, Korea (Suigen, Sakusyû, Mt. Syôyô-Zan, Zenzan, Keizyô & Mt. Hokugaku-Zan, Seiryôri, Keizyo, Keiki-Dô ; Phjŏngjang, Tečhon, Sinčhon, Thesong, Vsan-ri, Čhŏnne, Hjangam-ri, Vŏnsan, Sôkom, Dagelet, Dockdo), Ryukyu Is., Taiwan, India (CHÛJÔ, 1942 ; GRESSITT & KIMOTO, 1963 ; WARCHALOWSKI, 1969 ; JOLIVET, 1974 ; GRUEV, 1977).

New material : South Pyongan : Bongwa-ri, 45 km E from Pyongyan, 16. VIII. 1971, HP, 2 exs. (B) ; South Pyongan : Lyong-ak san, 14 km W from Pyongyan, 11. VIII. 1971, HP, 1 ex. (B) ; South Pyongan : Pyongyan, Hotel garden, 14., 18. VIII. 1971, HP, 14 exs. (B) ; Kengi : Bagyon san, San-chon tong, about 20 km SE from Kaesong, 8. VI. 1970, HZE, MS, 3 exs. (B) ; Kanwon : Kum-gang san, environs of Hotel Go-song, 29. V. 1970, HZE, MS, 2 exs. (B) ; South Phenan : NE environs of Pyongyang, 22. V. 1970, HZE, MS, 1 ex. (B) ; South Phenan : Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, HZE, MS, 5 exs. (B). Aedeagus examined.

Altica viridicyanea (BALY)

Graptodera viridicyanea BALY, 1874, Trans. Ent. Soc. Lond. : 191.

Known from : Japan, Ryukyu Is., Korea (Hjangam-ri, Dogsan-ri, Hekiteikwan, Gokokuzyôsi, Kwainei-Gun, Kankyô-Hokudô), China, India (CHÛJÔ, 1942 ; GRESSITT & KIMOTO, 1963 ; WARCHALOWSKI, 1969).

New material : South Phenan : Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 24. V. 1970, HZE, MS, 2 exs. (B) (det. S. KIMOTO).

Altica cirsicola OHNO

A. cirsicola OHNO, 1960, Bull. Dept. Lib. Arts Toyo Univ., 1 : 81.

Known from: Japan, China, Korea (Sangvŏn-am, Hjangam-ri) (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: South Pyongan: Mang-yong dae, 5. VIII. 1971, HP, 1 ex. (B); South Phenan: Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, HZE, MS, 2 exs. (B) (confirmed S. KIMOTO). Aedeagus examined.

Altica japana OHNO

A. himalayensis japana OHNO, 1960, Bull. Dept. Lib. Arts Toyo Univ., 1: 92.

A. japana: KIMOTO, 1976, Kurume Univ. J., 25: 172 (New status).

Known from: Japan.

New material: South Phenan: NE environs of Pyongyang, 22. V. 1970, HZE, MS, 1 ex. (B) (det. S. KIMOTO). Aedeagus examined. New to the Korean fauna.

Orthocrepis adamsi (BALY)

Hermaeophaga Adamsi BALY, 1874, Trans. Ent. Soc. Lond.: 193.

Known from: Japan.

New material: Kengi: Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B) (confirmed S. KIMOTO). New to the Korean fauna.

Batophila acutangula HEIKERTINGER

B. acutangula HEIKERTINGER, 1921, Kol. Rundsch., 9: 91.

Known from: E Siberia, E China, Korea (Onpho-ri, Tesŏng-san, Čangdžin-ho, Sangvŏn-am, Munsu-tong) (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: Ryang-gang: Plateau Chann-Pay, Sam-zi-yan, 1500 m, 24., 27. VIII. 1971, HP, 3 exs. (B); Kanwon: Kum-gang san, Man-mul san, 30. V. 1970, HZE, MS, 1 ex. (B); Kengi: Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, HZE, MS, 2 exs. (B).

Ochrosis sibirica PIC

O. sibirica PIC, 1909, Echange, 296: 155.

Known from: Siberia (Amur, Ussuri).

New material: South Pyongan: Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, HP, 1 ex. (B). New to the Korean fauna.

Chaetocnema concinnicollis (BALY)

Plectroscelis concinnicollis BALY, 1874, Trans. Ent. Soc. Lond.: 208.

Known from: Japan, Ryukyu Is., Korea (Čangdžin-ho, Čhŏnne, Hjangam-ri), Taiwan, China, N Vietnam (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: South Pyongan: Sa-gam, 45 km N from Pyongyan, 12. VIII. 1971, HP, 1 ex. (B); South Pyongan: Pyongyan, city park, 4. VIII. 1971, HP, 1 ex. (B);

Kaesong: Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, HP, 1 ex. (B).

Chaetocnema ingenua (BALY)

Plectroscelis ingenua BALY, 1876, Trans. Ent. Soc. Lond.: 594.

Known from: China, Mongolia, Japan, Korea (Hyngnam) (WARCHALOWSKI, 1969).

New material: South Pyongan: Pyongyan, Hotel garden and city park, 3–4. VIII. 1971, HP, 17 exs. (confirmed S. KIMOTO).

Chaetocnema discreta discreta (BALY)

Plectroscelis discreta BALY, 1876, Trans. Ent. Soc. Lond.: 596.

Known from: S China, N Vietnam, Ryukyu Is., Japan, Korea (Sangvŏn-am, Munsu-tong) (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: Kanwon: Kum-gang san, Go-song chon, upper reaches of brook below Hotel, 30. V. 1970, HZE, MS, 1 ex. (B); Kaesong: Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, HP, 8 exs. (B).

Chaetocnema koreana CHÛJÔ

C. koreana CHÛJÔ, 1942, Trans. Nat. Hist. Soc. Formosa, 32: 33.

Known from: Korea (Mt. Bazi-San, Kankyo-Hokudo), Tsushima (GRESSITT & KIMOTO, 1963).

New material: Kanwon: Kum-gang san, environs of Hotel Go-song, 29. V. 1970, HZE, MS, 1 ex. (B) (det. S. KIMOTO).

Argopistes tsekooni CHEN

A. Tsekooni CHEN, 1934, Sinensia, 5 (3–4): 316.

Known from: E China, Korea (Dagelet, Dockdo) (GRESSITT & KIMOTO, 1963; JOLIVET, 1974).

New material: Kengi: Bagyon san, near San-chon ri at San-chon tong, 22 km SE of Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B).

Argopistes unicolor JACOBY

A. unicolor JACOBY, 1885, Proc. Zool. Soc. Lond.: 738.

Known from: Japan, Korea, E Siberia (GRESSITT & KIMOTO, 1963).

New material: Kanwon: Kum-gang san, Man-mul san, 30. V. 1970, HZE, MS, 1 ex. (B).

Psylliodes attenuata (KOCH)

Haltica attenuata KOCH, 1803, Ent. Hefte, 2: 34.

Known from: Europe, Siberia, SW China, Japan, Korea (Suigen, Suigen-Gun, Keiki-Do; Hokusammen, Keisho-Hokudo; Musu-ri) (CHÛJÔ, 1942; GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: South Pyongan: Mang-yong dae, 5. VIII. 1971, HP, 1 ex. (B).

Nonarthra cyaneum BALY

N. cyaneum BALY, 1874, Trans. Ent. Soc. Lond.: 210.

Known from: Japan, China, Taiwan, Korea (Sŏkam-Juvŏndži, Džamo-ri, Jŏnpong-ri, Hypong-ri, Mjohjang-san) (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: South Pyongan: Chang-lyong san, 50 km N of Pyongyan, 13. VIII. 1971, HP, 3 exs. (B); South Phenan: Bong-ha ri on the river Te-dong, 45 km E from Pyongyang, 23. V. 1970, HZE, MS, 30 exs. (B); Kaesong: Mts. Pakyon, 20 km NE from Kaesong, 11. IX. 1971, HP, 3 exs. (B).

Subfamily **Hispinae**

Dactilispa angulosa (SOLSKY)

Hispa angulosa SOLSKY, 1871, Horae Soc. Ent. Ross., 8: 262.

Known from: SE Siberia, Japan, China, Korea (GRESSITT & KIMOTO, 1963).

New material: South Pyongan: Za-mo san, 60 km NE from Pyongyan, 2. IX. 1971, HP, 1 ex. (B); Kanwon: Kum-gang san, environs of Hotel Go-song, 29. V. 1970, HZE, MS, 1 ex. (B); Kanwon: Kum-gang san, Sam-il po, 1. VI. 1970, HZE, MS, 1 ex. (B); Kengi: Bagyon san, Bagyon popo, about 27 km SW from Kaesong, 7. VI. 1970, HZE, MS, 1 ex. (B).

Subfamily **Cassidinae**

Cassida nebulosa LINNAEUS

C. nebulosa LINNAEUS, 1758, Syst. Nat., ed. 10: 365.

Known from: Europe, Siberia, N China, Korea (Onpho-ri near Kjôngsông), Japan (GRESSITT & KIMOTO, 1963; GRUEV, 1977).

New material: South Pyongan: Pyongyan, Hotel garden, 4–5. VIII. 1971, HP, 1 ex. (B).

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Editor's note: (Prov.) South Phenan, Pyongyang, Bang-ha ri used by MS in 1970 is same as (Prov.) South Pyongan, Pyongyan, Bangwa-ri used by HP in 1971, respectively.

Some Rare Species of Ground-beetles Found by Mr. S. KASAHARA in the Ryukyus (Coleoptera, Carabidae)

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Mr. S. KASAHARA has afforded me an opportunity of examining the specimens he took in Ishigaki Is. and Iriomote Is., the Ryukyus, Japan. His collection contains three new species and two species hitherto not known to our fauna.

Before describing those species, I wish to extend my sincere thanks to Mr. S. KASAHARA for his kind offering the specimens, and to Dr. S. AZUMA, Messrs. Y. MIYAKE and K. TERADA for their giving me the specimens which avail me during the course of the present study. The holotypes of the new species described in this paper are deposited in our laboratory together with the other specimens.

BEMBIDIINI

Cillenus (*Novicillenus*) *kasaharai* sp. nov.

"Kiiro-kibanaga-mizugiwa-gomimushi"

Cillenus (*Novicillenus*) *aestuarii* UÉNO ?: HABU, 1975, Ent. Rev. Japan, 28 : 70, tab. 1.

Description. Length 3.4–4.1 mm (including mandibles). Width 1.15–1.35 mm.

Reddish yellow, head and elytra half-shiny or rather mat, pronotum rather shiny, head often brownish except clypeus and central area of frons, elytra pale at basal three-sevenths except basal area and at apical fourth, brownish at median area, faintly brownish at basal area, basal and median brownish areas united on interval 1; mandibles dark at apical fifth or fourth, antennae, palpi and legs fully pale, apical segments of antennae faintly infuscate; ventral side reddish yellow.

Head gently convex, not punctate; microsculpture distinct, isodiametric; posterior supraorbital setae fairly before level of hind margin of eyes; eyes moderately large, convex, WH/WF 1.61–1.68, mean 1.65, in four ♂♂ and six ♀♀; frontal impressions somewhat deep, weakly diverging, reaching clypeal setae, terminating a little beyond mid-eye level, outside area moderately convex; antennae reaching basal one-fifth of elytra, similar to those of *aestuarii*; mandibles well curved before apex, inner side simple.

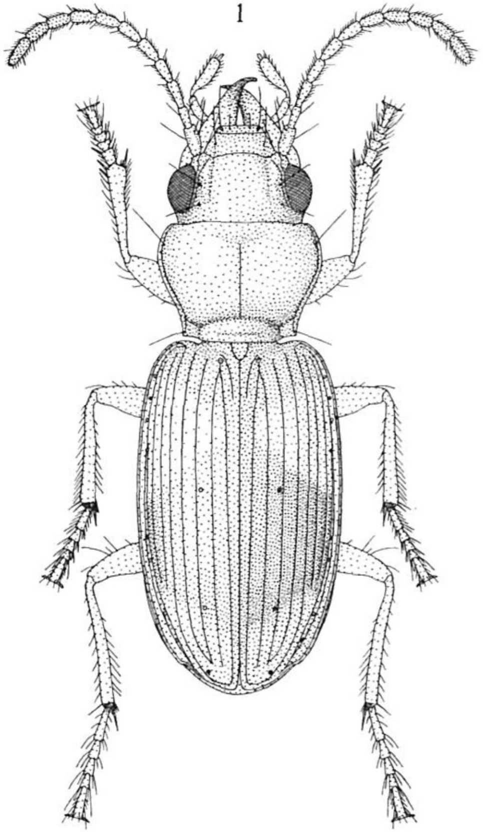
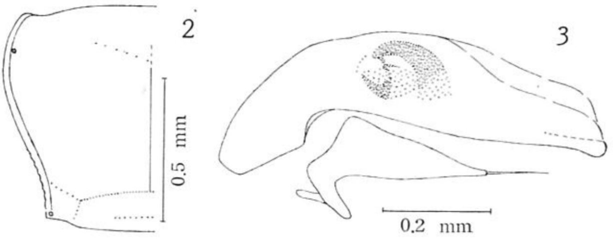


Fig. 1. *Cillenus* (*Novicillenus*) *kasaharai* sp. nov., ♀.

Pronotum (Fig. 2) cordate, moderately convex, widest behind one-fourth, one and one-tenth times as wide as head, one and one-third times as wide as long (in four ♂♂ and six ♀♀ WP/WH 1.07–1.13, mean 1.10, WP/LP 1.27–1.38, mean 1.32, WP/WBP 1.40–1.45, mean 1.44, WBP/WAP 0.81–0.85, mean 0.83); surface not punctate; microsculpture distinct, isodiametric; apex even, unbordered; apical angles slightly protrudent, narrowly rounded; base a little rounded at median area, sinuate on either lateral area, unbordered; basal angles distinct, almost rectangular or a little more than 90°; lateral margins gently contracted anteriorly, well contracted posteriorly, fairly sinuate at four-fifths, faintly indented before to behind sinuation; lateral explanate-reflexed areas well defined, rather narrow, slightly wider than in *aestuarii*; anterior marginal setae at one-fifth, posterior setae slightly before basal angles; median line fine, between anterior and posterior transverse impressions; anterior transverse impression obscure, posterior impression fully deep; basal foveae deep.

Wings developed. Elytra gently convex, widest at about middle, one and one-fourth times as wide as elytra (WE/WP 1.23–1.33, mean 1.28, in four ♂♂ and six ♀♀), one and two-thirds to one and seven-tenths times as long as wide; microsculpture distinct, isodiametric; basal border rounding at shoulder, terminating at base of stria 5; lateral margin very slightly rounded or almost parallel at about middle; apical sinuation fully deep; apex rather widely rounded; striae moderately impressed, striae 2 and 3 united behind basal pore, stria 2 evanescent at apical area, striae 6 and 7 effaced at five-sevenths, stria 8 (and interval 9) arising from fourth pore of marginal series at two-sevenths; apical striole deep, well continuous to stria 5; intervals almost flat, interval 3 with two pores at two-fifths and three-fourths, pores a little separated from stria 3, interval 6 convex at apical area, interval 8 somewhat convex, interval 9 well depressed; lateral explanate area or lateral groove wider than in *aestuarii*; basal three pores of marginal series in lateral groove, other pores on interval 9.



Figs. 2, 3. *Cillenus* (*Novicillenus*) *kasaharai* sp. nov.
2. Pronotum. 3. Male genitalia.

Hind trochanters not or a little visible in dorsal view; hind tarsi with segment 1 two and one-eighth to -fourth times as long as segment 2, segment 5/segment 1=0.86–0.91.

Ventral side not punctate; sternite 6 with one seta in ♂, two setae in ♀, at apex on either side.

Aedeagus (Fig. 3) almost similar to that of *aestuarii*; parameres with single long seta at apex.

Distribution. Japan: Ryukyus.

Type-series. Holotype: ♂, VI. 11, 1976, Ôhara, Iriomote Is., S. KASAHARA leg. Paratypes: 2♂♂, 6♀♀, same as holotype; 1♂, VII. 5, 1973, Ishigaki Is., A. SUGIMOTO leg.

Remarks. This depigmented species is easily distinguishable from *C.* (*Novicillenus*) *aestuarii* (UÉNO), in addition to its colouration, by the smaller size, the dorsal side a little less shagreened, the pronotum wider (WP/WH 1.04–1.07, WP/LP 1.25–1.27, WE/WP 1.28–1.34, in three ♀♀ of *C. aestuarii*), more contracted posteriorly at the lateral margins (WP/WBP 1.30–1.34, WBP/WAP 0.86–0.89 in *C. aestuarii*), the less elongate elytra (one and three-fourths to one and four-fifths times as long as wide in *C. aestuarii*) with the ninth interval well depressed, and the sixth sternite with a single seta—instead of two setae—on either side at the apex in the male.

PTEROSTICHINI

Dicaelindus ryukyuensis sp. nov.

"Tokkurimodoki-naga-gomimushi"

Description[1]. Length 9.4 (Minamidaitô ex.), 10.7 (Iriomote ex.) mm. Width 3.5 (former), 4.0 (latter) mm.

Black, rather shiny, head fairly iridescent under spotlight, pronotum hardly iridescent, elytra slightly iridescent; labrum dark reddish brown or reddish black, mandibles black except scrobe, palpi and antennae reddish brown, antennal segments 1 to 4 dark, lateral margins of pronotum and lateral to apical margin of elytra black, femora black, slightly reddish at apex, tibiae reddish black, tarsi reddish brown, somewhat dark; ventral side reddish black, iridescent.

Head (Fig. 10) moderately convex, with very minute, fully dense punctures; microsculpture rather faint, isodiametric, meshes fully smaller than usual; tempora somewhat depressed just behind eyes, oblique part more than one-half as long as eye; eyes moderately large and convex, WH/WF

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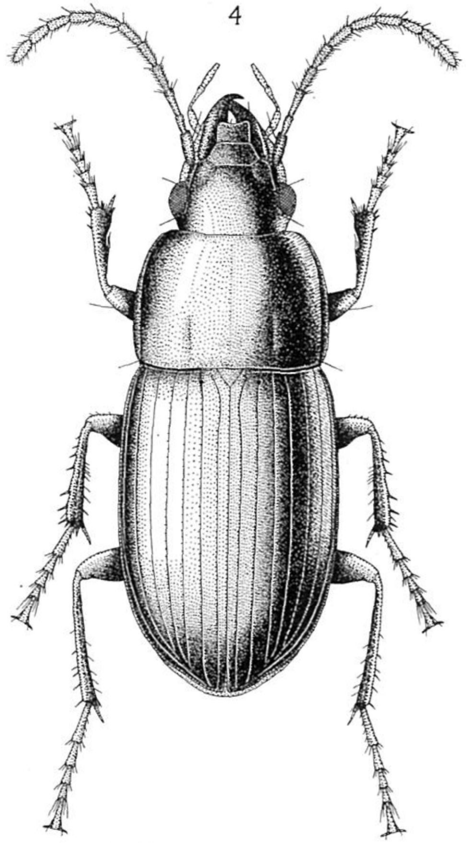

Fig. 4. *Dicaelindus ryukyuensis* sp. nov., ♂ from Iriomote Is.

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[1] *Dicaelindus* MacLeay having been unknown to our fauna, I refer to some generic characteristics in the description.

1.42, 1.42 in two ♂♂, ventral margin widely distant from buccal fissures; postgenae depressed beneath eyes, one carina branched from lateral border of buccal fissures below eyes; posterior supraorbital setae slightly before level of hind margin of eyes, interspace a little wider than interspace of anterior supraorbital setae; frontal impressions rather shallow, not extending onto clypeus, curved outward posteriorly, posterior termination fully distant from frontal lateral furrows; clypeus symmetric in Minamidaitô ex., right apical angle a little protrudent in Iriomote ex. as in Fig. 10; antennae reaching basal one-seventh of elytra, pubescent from segment 4, segment 2 without additional setae at apex, segment 4 as long as to slightly longer than segment 3; labrum distinctly emarginate at apex, somewhat asymmetric, right apical angle more protrudent than left apical angle (less protrudent in Minamidaitô ex.); mandibles rather slender, dorsal outer ridge more raised than usual in Pterostichini, narrowly, much more raised and somewhat carinate on right mandible than on left mandible; palpi slender, glabrous, apical segment as long as penultimate segment in maxillary palpi, fully shorter than penultimate segment in labial palpi (Fig. 5); mentum (Fig. 5) deeply emarginate, lateral lobes rather long, with some oblique sulci, slightly in Minamidaitô ex., somewhat deeply in Iriomote ex., sinuate on outer margin before middle, median tooth fully wide and long, roundly contracted apically, narrowly emarginate at apex forming two dull wide teeth, setae fully long, rather narrowly distant from each other.

Pronotum (Fig. 9) fairly convex, somewhat trapezoid, widest at or behind seven-tenths, at least one and one-half times as wide as head, less than one and one-half times as wide as long, base fully wider than apex (WP/WH 1.51, 1.59, WP/LP 1.46, 1.48, WP/WBP(s) 1.08, 1.06, WBP(s)/WAP 1.48, 1.50, in Iriomote ex. and Minamidaitô ex. respectively); surface a little matter than on head and elytra, with minute dense punctures like on head, but without usual large punctures anywhere; microsculpture distinct, meshes same as on head; apex evenly, narrowly, shallowly emarginate at middle, somewhat rounded-oblique at lateral areas, completely unbordered; apical angles indistinct, roundly, a little protrudent; base slightly emarginate at median area, weakly oblique at lateral areas, wholly unbordered; basal angles obtuse and rounded; lateral margins rather roundly, moderately contracted anteriorly, slightly roundly, weakly contracted posteriorly, with fine sulcus instead of furrow, sulcus close to lateral margins behind apical angles, thence well distant from lateral margins, terminating in basal angles at posterior setae, outside area of sulcus not at all explanate-reflexed, but somewhat convex; anterior marginal setae absent, posterior setae close to basal angles; median line fine, rather faint, reaching neither extremity; anterior and posterior transverse impressions almost absent; basal foveae linear, shallow, between lateral margin and median line on either side, widely effaced before base, outside area slightly convex.

Wings developed. Elytra well convex, elliptic, widest before middle, one and one-eighth times as wide as pronotum (WE/WP 1.13 in Iriomote ex.), a little less than one and one-half times as long as wide; surface with minute dense punctures as on head and pronotum; microsculpture rather faint, forming moderately transverse small meshes; basal border almost linear or slightly sinuate, weakly slanting outward, forming distinct angle (more than 90°) at shoulder; shoulder dentate; lateral margin slightly dilated towards greatest width, apical sinuation (Fig. 6) and inner plica distinct; apex angulate, rectangular (Minamidaitô ex.) or a little dull (Iriomote ex.); striae moderately impressed, not punctate, stria 1 widely evanescent at basal area and therefore not reaching basal border, stria 7 reaching stria 1 at apex; scutellary striole absent; basal pore on stria 2; intervals slightly convex, interval 3 without dorsal pore, intervals 5+7 fairly convex at subapical area, interval 8 moderately wide at basal half (Fig. 7), becoming narrow posteriorly, fully narrow and somewhat carinate before first subapical pore (Fig. 6), thence a little dilated, evanescent opposite interval 3, interval 9 becoming conspicuously narrow behind humeral area (Fig. 7) and hidden under interval 8 (so hardly visible in dorsal view), thence becoming moderately wide from about middle; first and second subapical pores and apical pore (Fig. 6) on interval 8, adjoining stria 7; marginal series interrupted at middle, 8+8.

Fore tarsi of ♂ (Fig. 8) not dilated, segment 1 one and four-fifths to twice as long as wide, at least twice as long as segment 2 which is almost as long as wide, ventral side[2] with setae and pubescence on either lateral margin, without adhessive hairs nor whitish scales; mid and hind tarsi not sulcate; tarsal segment 5 glabrous ventrally; hind tarsi as long as head width, segment 1 one and two-thirds to one and five-sevenths times as long as segment 2, segment 5 distinctly shorter than segment 1, proportion 0.83, 0.88 in Iriomote ex. and Minamidaitô ex. respectively.

Ventral side densely punctate on pro-, meso- and metepisterna and lateral areas of pro- and metasternum, well rugose-punctate at lateral areas of sternites; prosternal process bordered at apex; metepisterna at least one and one-third times as long as wide (L/W 1.39, 1.33 in Iriomote

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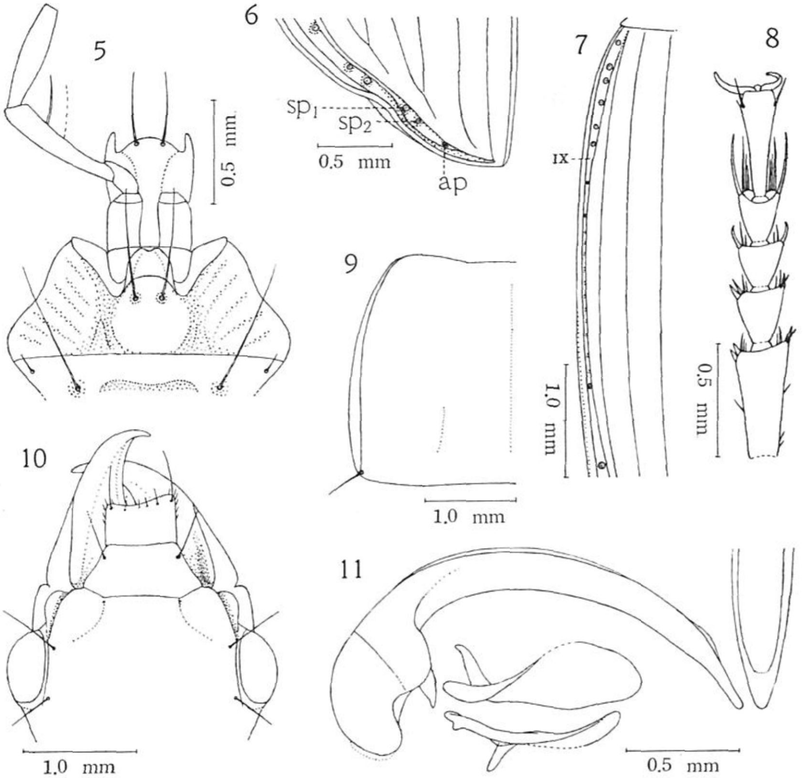
[2] According to ANDREWES (1924), the male fore tarsi are "with a row of narrow whitish scales along the margin at each side" on the ventral side in *D. felspaticus* MACLEAY, *D. impunctatus* (BATES) and *D. pernitidus* (CHAUDOIR).



Figs. 5–11. *Dicaelindus ryukyuensis* sp. nov., ♂ from Iriomote Is. 5. Submentum, mentum, labial palpus and ligula with paraglossae. 6. Left elytron at apical area. sp$_1$: first subapical pore. sp$_2$: second subapical pore. ap : apical pore. 7. Left elytron at lateral area in laterodorsal view. IX : interval 9. 8. Left fore tarsus in ♂. 9. Pronotum. 10. Head. 11. Male genitalia.

ex. and Minamidaitô ex. respectively), outer border obscure or evanescent at front outer area ; sternites not transversely sulcate, sternite 6 with single seta on either side in ♂.

Aedeagus (Fig. 11) uniformly, well arcuate, hardly or slightly twisted to right side, fairly slender, basal part stout, apical part not thin, apex narrowly rounded ; basal bulb delimited, left margin deeply sinuate ; apical lamella gently contracted apically, a little longer than wide, rounded at apex ; parameres not strongly chitinized, left paramere rather narrow, rounded at apex, right paramere a little shorter and fully narrower than left paramere, rounded at apex.

Distribution. Japan : Ryukyus.

Type-series. Holotype : ♂, VI. 9, 1976, Ôhara, Iriomote Is., S. KASAHARA leg. Paratype : 1♂, VI. 9, 1964, Minamidaitô Is., S. AZUMA leg.

Remarks. Seven species of *Dicaelindus* have been known from Asia. The present new species is distinguishable from *Lagarus impunctatus* BATES from Ceylon and *Arsenoxenus nitescens* TSCHITSCHÉRINE from Borneo or Sumatra by the pronotum with the lateral borders well dilated posteriorly—only slightly dilated behind in these two species (after ANDREWES, 1933), from *Melanodes pernitidus* CHAUDOIR (= *Arsenoxenus harpaloides* BATES) from India and Burma, *Dicaelindus felspaticus* MACLEAY from Java and *D. omestes* ANDREWES from Sumatra by the isodiametric microsculpture of the pronotum—it consists of extremely closely placed transverse lines in the former two (after ANDREWES, 1924) or consists of extremely fine lines forming wide meshes in the latter one (after ANDREWES, 1933), from *D. collinus* ANDREWES from Borneo by the pronotum with a distinct marginal seta in the basal angles—without visible seta in *D. collinus,* according to ANDREWES, 1933—and from *D. longimalis* ANDREWES from Java by the colour of the antennae and the microsculpture of the elytra : the antennae are piceous, and ferruginous only at the basal half of the first segment and the microsculpture of the elytra is formed by very fine irregular transverse lines in *D. longimalis* (after ANDREWES, 1937).

The right mandible well raised on the dorsal outer ridge is not a generic characteristic but a specific one and seems to be sexual dimorphism (after ANDREWES, 1924). The asymmetric labrum is also a peculiar characteristic, but I do not know whether it is unique only in *D. ryukyuensis* or common to the species with the right mandible more raised on the dorsal outer ridge than in the left mandible.

CALLISTINI

Chlaenius (*Chlaenius*) *guttula* CHAUDOIR

"Chibi-hitotsume-ao-gomimushi"

Chlaenius guttula CHAUDOIR, 1856, Bull. Soc. Nat. Mosc., 29 (3) : 216-217 (Hong Kong) ; CHAUDOIR, 1876, Ann. Mus. Civ. St. Nat. Gen., 8 : 25, 281 ; ANDREWES, 1929, Tijdschr. Ent., 72 : 312 ; ANDREWES, 1941, Ann. Mag. Nat. Hist., (11) 7 : 310.

Chlaenius cuspidatus HELLER, 1923, Philipp. Journ. Sci., 23 : 301-302 (Luzon and Mindanao) ; ANDREWES, 1926, Ann. Mag. Nat. Hist., (9) 17 : 254.

Chlaenius guttula CHAUDOIR var. *cuspidatus* HELLER : ANDREWES, 1930, Cat. Ind. Ins., part 18 : 94.

Callistoides guttula CHAUDOIR : JEANNEL, 1949, Faun. Emp. Fran., 11 : 824.

Description[3]. Length 7.5-8.1 mm. Width 2.9-3.1 mm.

Head metallic green, half-shiny, pronotum and elytra black, somewhat greenish (not metallic), fully mat ; clypeus light reddish brown at apical area, mandibles light reddish brown, dark at apical area, labrum,

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[3] The description is made from two male specimens from the Ryukyus and one female from Formosa.

palpi and antennal segment 1 reddish yellow, antennal segments 2 to 11 dark reddish brown (segment 2 less dark), lateral margins of pronotum and lateral to apical margin of elytra somewhat brownish, elytra with reddish yellow patch at subapical area on intervals 1 to 3, legs reddish yellow, tarsi more reddish than femora and tibiae; ventral side reddish black, metasternum, metepisterna, sternites and epipleurae well iridescent.

Head gently convex, densely pubescent-punctate, punctures rather large, interspace of punctures somewhat carinate in part; microsculpture distinct, isodiametric; tempora more oblique behind eyes than in *deliciolus* and *pericallus*, oblique part shorter than in those two spp., one-fifth as long as eye; eyes well convex and large, WH/WF 1.83, 1.84, 1.74 in two ♂♂ and one ♀ respectively, genuine ventral margin narrowly separated from buccal fissures; frontal impressions very shallow; antennal segment 1 sparsely pubescent, segment 2 somewhat densely pubescent, segment 3 densely (a little less densely than following segments) pubescent, a little (at most one-fifteenth) longer than segment 4; palpi slender, apical segment subcylindrical, in maxillary palpi at most one and one-seventh times as long as penultimate segment which has one distinct seta at inner apical area, penultimate segment of labial palpi with two stout (one of them fully stouter and spiniform) setae before apex and four stout setae at basal half on inner side, two outer apical setae spiniform; mentum tooth bifid.

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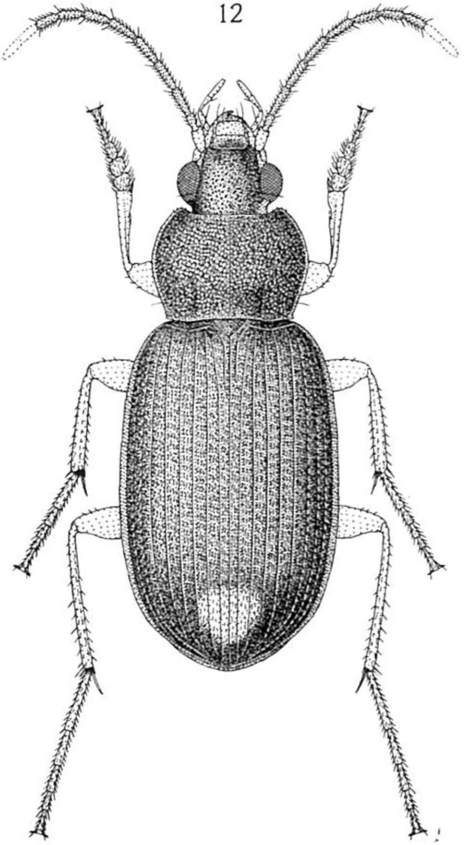
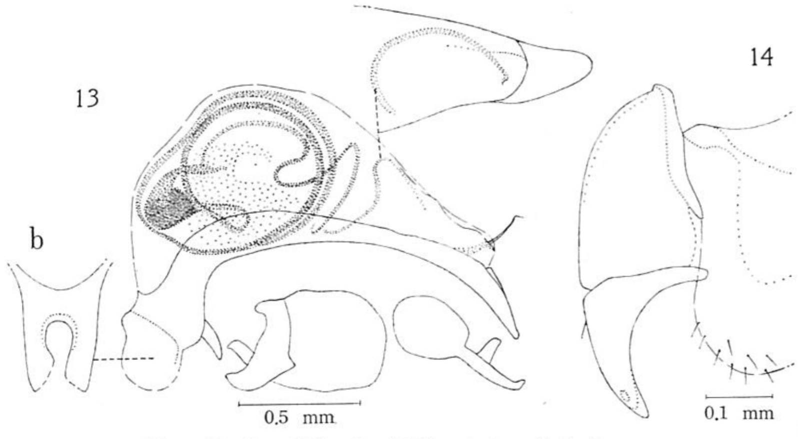


Fig. 12. *Chlaenius* (*Chlaenius*) *guttula* CHAUDOIR, ♂.

Pronotum transverse, gently convex, widest at middle, one and one-half times as wide as head, one and one-half times as wide as long (WP/WH 1.48, 1.50, 1.46, WP/LP 1.49, 1.47, 1.47, in two ♂♂ and one ♀ respectively, WP/WBP 1.26, 1.28, WBP/WAP 1.29, 1.22, in two ♂♂); surface densely pubescent, with compact large punctures, interspace of punctures fully narrow, rather carinate; microsculpture fully distinct, isodiametric; apex almost even or somewhat emarginate except at lateral areas; apical angles well protrudent, narrowly rounded; base unbordered, somewhat deeply emarginate at median area, straightly oblique at lateral areas; basal angles obtusely, well angulate (ca. 110°); lateral margins not bordered, moderately rounded anteriorly, very shallowly to somewhat deeply sinuate before basal angles; lateral explanate-reflexed areas very narrow; posterior marginal setae far before basal angles; basal foveae somewhat deep, rather wide.

Wings developed. Elytra moderately convex, ovate, widest at middle, one and two-fifths times as wide as pronotum (WE/WP 1.38, 1.40, 1.40 in two ♂♂ and one ♀), one and three-fifths times (♂) or a little more than one and one-half times (♀) as long as wide; surface densely pubescent, densely granulate; microsculpture strongly sculptured, isodiametric; basal border complete, well sinuate or bent opposite interval 4, forming wide obtuse angle at shoulder; apical sinuation almost absent; apex a little rounded; striae fine, shallower than in *deliciolus*, not punctate; basal pore adjoining stria 1, moderately remote from basal border; intervals flat.

Legs slender; fore tibiae with single spine on outer apical angle,



Figs. 13, 14. *Chlaenius* (*Chlaenius*) *guttula* CHAUDOIR.
13. Male genitalia. b. Basal part of aedeagus in hind view.
14. Left stylus and inner part of hemisternite.

without spine on outer margin; tarsi sparsely pubescent on dorsal side; hind tarsi one and three-fifths to one and seven-tenths times as long as head width in ♂, one and one-half times in ♀, segment 1 a little more than one and three-fourths times as long as segment 2 in ♂, one and six-sevenths times in ♀, segment 5/segment 1=0.38, 0.40, 0.39 in two ♂♂ and one ♀ respectively.

Ventral side densely pubescent-punctate, punctures smaller at median area of sternites than at other areas, epipleurae rather sparsely pubescent; prosternal process not bordered, pubescent; L/W of metepisterna 1.20, 1.18 in one ♂ and one ♀ respectively; sternite 6 with one seta in ♂, two setae in ♀, on either side, same in form in ♂ and ♀, hardly sinuate at subapical area on either side.

Aedeagus (Fig. 13) well curved before basal bulb, gently curved from behind middle to before middle, fairly curved ventrally at subapical area, slightly twisted to left side, ventral side shallowly depressed at subapical area, lateral sides rather narrow; apical membranous area well developed, extending up to before basal bulb; basal bulb (Fig. 13, b) deeply, rather widely split forming one distinct tubercle on dorsal side, two lobes distinctly longer than in *pericallus*; apical lamella a little turning to right side, one and two-fifths times as long as wide, left margin gently rounded near base, right margin shallowly sinuate before base, apex widely rounded; parameres not well sclerotized, right paramere almost rounded at apical half.

Basal segment of styluses (Fig. 14) glabrous, well rounded at inner margin, apical segment fully dilated outward at base, roundly, deeply sinuate at outer side, ventral outer margin without spines, dorsal side with one rather short and fine spine before base close to inner margin; hemisternites widely membranous and sparsely pubescent at apical area.

Distribution. Japan: Ryukyus—Mt. Banna, Ishigaki Is. (S. KASAHARA leg.). Formosa—Chipen, at alt. 50 m (K. TERADA leg.). Philippines. Timor Is. Java. Sumatra. S. China.

Remarks. It is the smallest *Chlaenius* species in those of Japan, related to *C. pericallus* REDTENBACHER and *C. deliciolus* BATES. The aedeagus contains at about a basal fourth a large copulatory piece with a developed, fully long and slender stripe which whirls behind the middle twice (in the left lateral view) or three times (in the right lateral view), thence turns and twists towards the apex, projecting outward beyond the membranous part at the subapical area.

PANAGAEINI

Craspedophorus formosanus JEDLIČKA

"Taiwan-yotsuboshi-gomimushi"

Craspedophorus formosanus JEDLIČKA, 1939, Neu. Carab. Ostasien, 12 : 2 ("Formosa"); JEDLIČKA, 1962, Niponius, 1 (15): 2; JEDLIČKA, 1965, Annot. Zool. Bot., Bratislava, no. 12 : 3, 5.

Description[4]. Length 12.3–13.0 mm. Width 4.8–5.1 mm.

Deep black, head shiny, pronotum and elytra rather shiny; labrum, mandibles (faintly brownish at apical area), palpi, antennae and legs black, antennal segments 5 to 11 faintly reddish; elytral patches (Fig. 19) yellow, faintly reddish, smaller in Iriomote ex. than in Lishan ex., anterior patch on intervals 5 to 9 and reaching lateral margin, thence extending ventrally onto outer half of epipleurae, a little extending onto interval 4 in Lishan ex., inner part on intervals 4 and 5 distinctly shorter than that of Lishan ex., and therefore patch more dentate in Iriomote ex., posterior patch on intervals 5 to 8, a little extending onto interval 4 in Lishan ex., inner part on intervals 5 and 6 fully shorter and patch well dentate in Iriomote ex.; ventral side deep black. Pubescence on body shorter, finer and less dark in colour than in *mandarinus*.

Head almost flat or slightly convex at central area, with irregular large punctures except on posterior area behind neck-constriction and clypeus, somewhat rugose behind neck-constriction; microsculpture absent; neck-constriction shallow or rather shallow on dorsal

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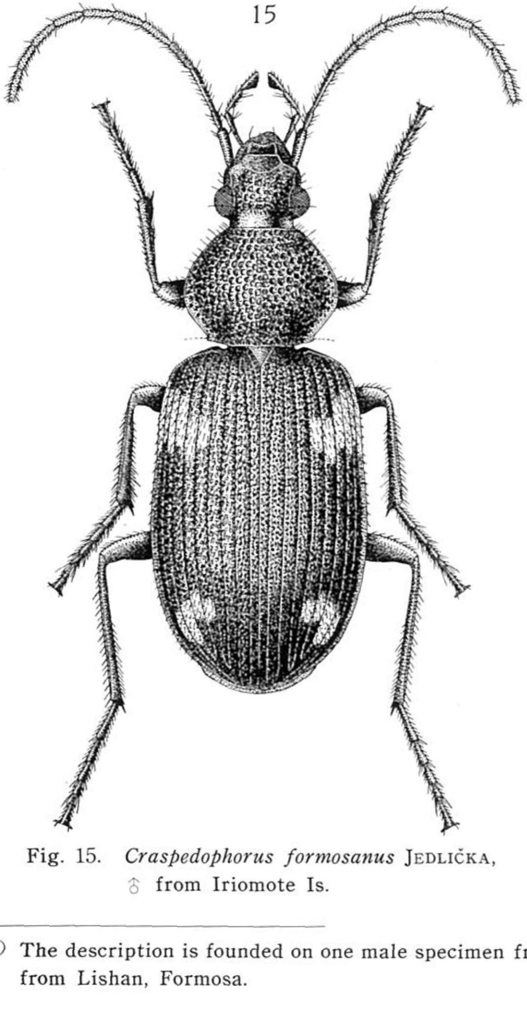

Fig. 15. *Craspedophorus formosanus* JEDLIČKA, ♂ from Iriomote Is.

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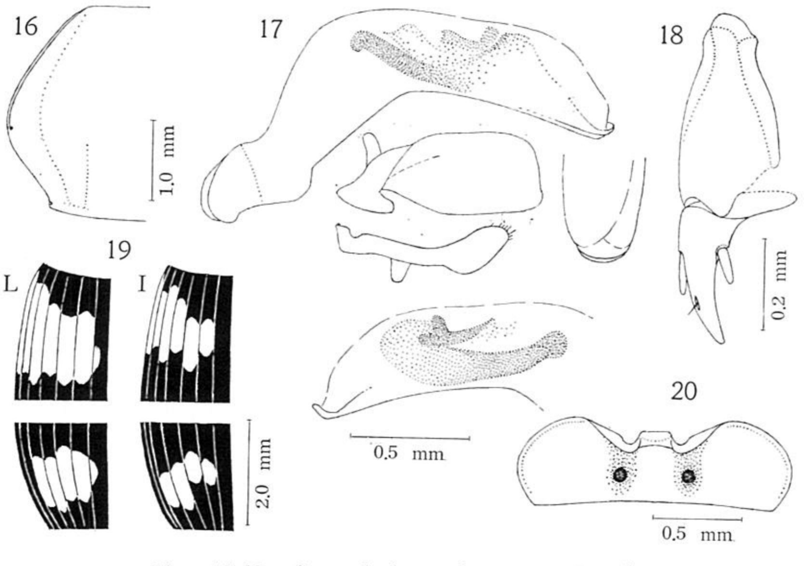
[4] The description is founded on one male specimen from Iriomote Is. and one female from Lishan, Formosa.

side; eyes well convex, WH/WF 1.65, 1.60 in Iriomote ex. and Lishan ex. respectively; frontal impressions rather deep; antennae slender, reaching basal one-third of elytra, segment 1 three and three-fifths to three and two-thirds times as long as wide, segment 3 long, one and one-sixth to -eighth times as long as segment 1, less than to just one and one-half times as long as segment 4; apical segment of palpi well dilated; lateral lobes of mentum (Fig. 20) distinctly shorter and wider than in *mandarinus* though fairly exceeding median tooth.

Pronotum (Fig. 16) slightly convex, widest at or before three-fifths, one and five-eighths times as wide as head, one and two-sevenths times as wide as long (WP/WH 1.63, 1.64, WP/LP 1.30, 1.28, WP/WBP 1.44, 1.41, WBP/WAP 1.52, 1.57, in Iriomote ex. and Lishan ex. respectively); surface densely pitted, pits somewhat irregular in size, interspace of pits gently convex; microsculpture absent; apex truncate; apical angles obtuse, not protrudent; base slightly rounded at median area, evenly, gently oblique at lateral areas; basal angles distinct, obtusely angulate; lateral margins finely bordered from behind apical angles to greatest width in Iriomote ex., border a little extending beyond greatest



Figs. 16–20. *Craspedophorus formosanus* JEDLIČKA.
16. Pronotum (♂ from Iriomote Is.). 17. Genitalia (♂ from Iriomote Is.). 18. Left stylus (♀ from Lishan, Formosa). 19. Anterior and posterior elytral patches. L. ♀ from Lishan. I. ♂ from Iriomote Is. 20. Mentum (♂ from Iriomote Is.).

width in Lishan ex., evenly (Iriomote ex.) or somewhat roundly (Lishan ex.), conspicuously contracted anteriorly, well arcuate at greatest width, fully contracted posteriorly, obtuse-angularly, distinctly sinuate just before basal angles, lateral margins parallel from sinuation to basal angles in very short distance; anterior marginal setae at greatest width, posterior setae slightly before basal angles; lateral areas widely explanate, fairly reflexed from greatest width to basal angles; median line invisible; basal foveae linear, deep, deeply depressed outside.

Wings developed. Elytra ovate, fairly convex (distinctly less convex than in *mandarinus*), widest at middle, one and two-fifths times as wide as pronotum (WE/WP 1.40, 1.42), one and four-sevenths times as long as wide; surface distinctly, densely pubescent-punctate; microsculpture distinct, isodiametric; apical sinuation shallower than in *mandarinus*; striae moderately deep, distinctly punctate; intervals gently convex.

Tarsi slender, segment 4 (Fig. 21) emarginate at apex, not bilobed; hind tarsi one and one-third (♀) or one and three-eighths times (♂) as long as head width, segment 1 one and four-sevenths (♂) to one and three-fifths times (♀) as long as segment 2, segment 5/segment 1=0.83-0.84.

Ventral side with dense large punctures or pits and rather dense pubescence on pro-, meso- and metathorax and lateral areas of sternites, with dense small pubescent punctures on median area of sternites; L/W of metepisterna 1.48, 1.45 in Iriomote ex. and Lishan ex. respectively.

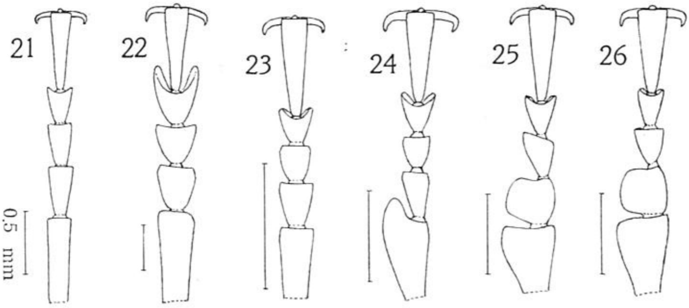
Aedeagus (Fig. 17) a little stout, moderately curved, ventral side straightly oblique from before basal bulb to middle, apex reflexed; basal bulb rather small, well split behind; apical lamella fully short, not delimited, fully widely truncate-rounded at apex; left paramere truncate and glabrous at apex, right paramere a little shorter than left paramere, sparsely pubescent at apex.

Styluses (Fig. 18) similar to those of *Panagaeus, Dischissus* and *Peronomerus*.

Distribution. Japan: Ryukyus—Ôhara, Iriomote Is. (S. KASAHARA leg). Formosa —Lishan (Y. MIYAKE leg.). ? S. China: "Prov. Fukien" (after JEDLIČKA, 1955).

Remarks. The aedeagus contains two large copulatory pieces at about the middle, one is one-half as long as the aedeagus, rather shaft-shaped at the basal half and spatulate, while the other is smaller, adjoining the dorsal side of the spatulate one.

Each single specimen from the Ryukyus and Formosa differs in the form of the elytral patches as indicated in Fig. 19, but I regard at present both the specimens as conspecific. This species rather more resembles the Japanese *Dischissus mirandus* BATES than *Craspedophorus mandarinus* (SCHAUM) which is also distributed in Formosa, but the slender tarsi with the fourth segment not bilobed at the apex exclude it from *Dischissus* (Figs. 21 and 22).



Figs. 21–26. Right fore tarsi (♂) of Panagaeini of Japan (setae and pubescence omitted).
21. *Craspedophorus formosanus* JEDLIČKA. 22. *Dischissus mirandus* BATES.
23. *Microcosmodes flavopilosus* (LAFERTÉ). 24. *Peronomerus auripilis* BATES.
25. *Tinoderus singularis* (BATES). 26. *Panagaeus japonicus* CHAUDOIR.

Notes on Craspedophorus japonicus. JEDLIČKA (1962) described *Craspedophorus japonicus* from Japan—he did not mention the name of the type-locality, only took down "Japan" in 1962, but later in 1965 he wrote "Japan: Aomori", which is the northernmost part of Honshu.

There are four types of the male fore tarsi in the Panagaeini so far as the genera of Japan are concerned: 1) Basal two segments widely dilated, with adhessive hairs ventrally—*Panagaeus* (Fig. 26) and *Tinoderus* (Fig. 25); 2) Only the first segment well dilated, protrudent at the inner apical angle, with adhessive hairs ventrally—*Peronomerus* (Fig. 24); 3) The first to fourth segments very slightly or hardly dilated, but with adhessive hairs ventrally—*Microcosmodes* (Fig. 23); 4) The fore tarsi similar in ♂ and ♀, without adhessive hairs ventrally—*Dischissus* (Fig. 22) and *Craspedophorus* (Fig. 21).

Craspedophorus japonicus, according to JEDLIČKA's figure, has the fore tarsi with basal three (!) well dilated segments—the dilated third segment must be his lapsus calami. This characteristic evinces its belonging to *Panagaeus* instead of *Craspedophorus*, and his description indicates that it is nothing but *P. japonicus* CHAUDOIR, and therefore I arrange it here.

Panagaeus japonicus CHAUDOIR.

Craspedophorus japonicus JEDLIČKA, 1962, Niponius, 1 (15): 1–2, fig. 1 ("Japan"); JEDLIČKA, 1965, Annot. Zool. Bot., Bratislava, no. 12: 2, 4, fig. 2. Junior synonym, designated here.

ZUPHIINI

Planetes (*Planetes*) *kasaharai* sp. nov.[5]

"Muneaka-sujibane-gomimushi"

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[5] After I completed the typescript, I received the Entomological Review of Japan, vol. 31 (1978), in which Mr. T. SHIBATA recorded *Planetes ruficollis* NIETNER from Ishigaki Is. in p. 102, but it is fully possible that his species is identical with the present new one.

Description. Length 9.4 mm (up to apex of elytra) or 9.6 mm (up to apex of abdomen). Width 3.5 mm.

Head black, yellowish-reddish brown on clypeus, reddish brown at anterolateral areas of frons, rather mat, labrum and mandibles light reddish brown, antennae, palpi and legs light orange, antennal segment 1 infuscate, pronotum orange, somewhat shiny, faintly iridescent under spotlight, elytra black, fully mat, base, lateral margin and apical area somewhat reddish, scutellum reddish black; ventral side dirty orange, infuscate on head (except mentum and gula), lateral areas of meso- and metathorax and sternites except lateral areas of sternites 1 and 2.

Head gently convex between eyes, frons obliquely rugose on either laterodorsal area, with rather dense distinct pubescent punctures on posterior half, rather sparse smaller pubescent punctures on anterior half, clypeus smooth and glabrous except for two or three setae along oblique part of frontoclypeal suture on either side; microsculpture fully distinct, isodiametric; eyes large and convex, WH/WF 1.72, pubescence shorter and less dense than in *ruficollis*; frontal impressions deeper than in *ruficollis*; antennae reaching basal one-fifth of elytra, segment 1 four times as long as wide; apical segment of maxillary palpi (Fig. 29) one and one-half times as long as penultimate segment, penultimate segment of labial palpi (Fig. 28) with a few setae besides some setae or bristles on inner side; mentum (Fig. 28) with several short setae, tooth truncate-rounded at apex, epilobes a little projecting beyond apex of lateral lobes; ligula with

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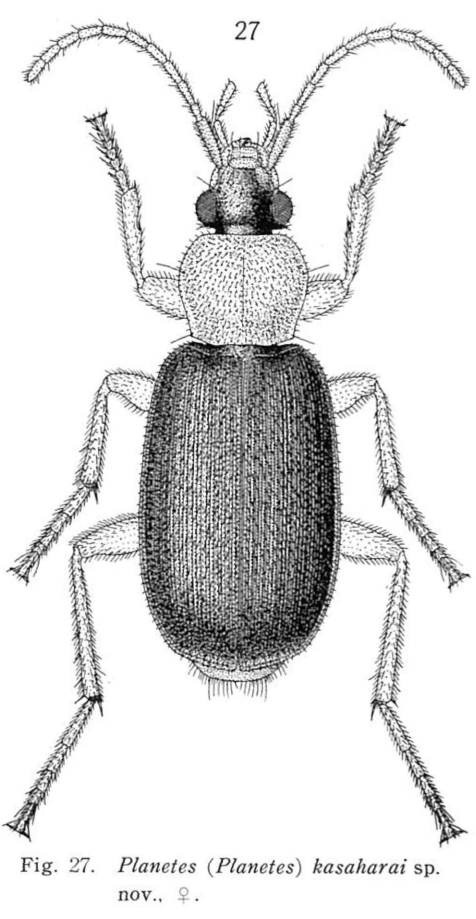
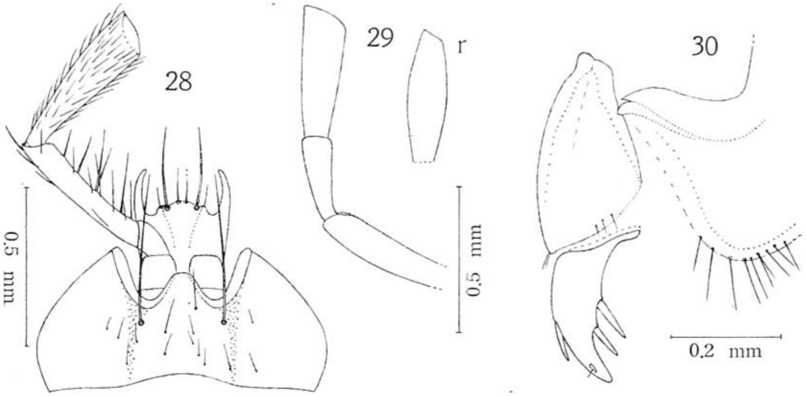


Fig. 27. *Planetes* (*Planetes*) *kasaharai* sp. nov., ♀.

two short setae between long ordinary setae and one short seta outside long ordinary setae on either side.

Pronotum gently convex, almost flat on disc, widest at two-fifths, one and one-third times as wide as head, one and one-sixth times as wide as long (WP/WH 1.33, WP/LP 1.18, WP/WBP 1.24, in single ♀); surface rather densely pubescent-punctate, punctures distinct; microsculpture rather faint, forming transverse meshes on disc, very distinct, forming fully small isodiametric meshes and seemingly granular on marginal areas; apex narrowly, slightly emarginate at middle; apical angles well rounded, not protrudent; base shallowly emarginate at median area, fairly oblique at lateral areas; basal angles obtusely angulate (right basal angle abnormally somewhat rounded); lateral margins fairly rounded anteriorly, almost evenly contracted posteriorly, slightly sinuate at four-fifths, incision at posterior marginal setae small and shallow; lateral explanate-reflexed areas similar to those of *ruficollis*; anterior marginal setae at one-third, posterior setae close to basal angles (right seta abnormally before basal angle); median line fine, shallow; anterior transverse impression absent, posterior impression shallow; basal foveae rather deep.

Wings developed. Elytra gently convex (a little more convex than in *ruficollis*), widest behind middle, one and four-sevenths times as wide as pronotum (WE/WP 1.56), one and five-eighths times as long as wide; basal border distinctly sinuate, level at inner half, straightly, fairly oblique at outer half, forming distinct obtuse angle at shoulder; lateral



Figs. 28–30. *Planetes* (*Planetes*) *kasaharai* sp. nov. (except Fig. 29, r). 28. Mentum, labial palpus and ligula with paraglossae. 29. Left maxillary palpus (setae excluded). r. apical segment in *P.* (*Heteroglossa*) *ruficollis* (NIETNER) (♀) from India. 30. Left stylus and inner part of hemisternite.

margin slightly roundly, moderately dilated towards middle; outer apical angle widely rounded; apical truncation gently oblique, slightly rounded, with very narrow, membranous border; inner apical angle almost rectangular though dull at apex; primary cota 8 widely abbreviate at basal area, more widely evanescent at apical area, other primary costae, secondary costae and interspaces of costae similar to those of *puncticeps* and *formosanus*; marginal series almost continuous, composed of eighteen or nineteen pores.

Ventral side densely, distinctly pubescent-punctate, but punctures hardly visible on proepisterna; sternite 6 of ♀ with six setae on either side at apex.

Hind tarsi with segment 1 one and five-sixths times as long as segment 2, segment 5 five-eighths (proportion 0.63) as long as segment 1.

Basal segment of styluses (Fig. 30) with a few rather short setae (two or three on ventroinner side and outer ventral area at apex), apical segment with two long spines on outer ventral margin; hemisternites more widely sclerotized than in *puncticeps* and therefore apical membranous area fully narrower, with rather dense long setae.

Distribution. Japan: Ryukyus.

Type-specimen. Holotype: ♀, VI. 8, 1976, Ôhara, Iriomote Is., S. KASAHARA leg.

Remarks. The present new species well resembles *P*. (*Heteroglossa*) *ruficollis* (NIETNER) in the colour and size, but, besides the subgeneric characteristics, the head is with the microsculpture fully distincter, the eyes are with less dense, shorter setae, the first antennal segment is infuscate and longer (light orange and three and one-fourth times as long as wide in *P. ruficollis*), and the pronotum is with a small indistinct (larger and deeper in *ruficollis*) incision on the lateral margins at the posterior marginal setae. I have examined two Indian specimens of *P. ruficollis* thanks to Mr. M. E. BACCHUS of the British Museum (Natural History).

In 1964 (HABU, 1964) I segregated *Heteroglossa* from *Planetes* on the basis of the bisetose ligula, but it seems not necessarily to be worthy to support the two genera. However, there being two types in the form of the apical segment of the palpi among the species of *Planetes*, I divide the genus into two subgenera as in the following key.

Key to subgenera

1. Apical segment of palpi somewhat dilated towards apex, apical truncation rather wide (Figs. 28, 29); ligula plurisetose at apex; elytra with or without patch ……………………………………… *Planetes*

— Apical segment of palpi rather fusiform, a little tumid at middle, narrowed towards apex, apical truncation narrow (Fig. 29, r); ligula bisetose (sometimes with one short secondary seta between long ordinary setae) at apex; elytra without patch (in spp. so far as I am aware) ……………………………………… *Heteroglossa*

Key to species of Japan

1. Larger, length 12.0–13.0 mm (up to apex of elytra); elytra with one yellow patch before middle on either side···*P.* (*Planetes*) *puncticeps* ANDREWES
   Distribution. Japan: Honshu; Shikoku; Kyushu; Satsunans. Korea. China. Formosa.

— Smaller, length less than 10.0 mm; elytra without patch··············2

2. Pronotum orange; head with distinct isodiametric microsculpture and rather mat·······························*P.* (*Planetes*) *kasaharai* sp. nov.
   Distribution. Japan: Ryukyus.

— Pronotum black; head without microsculpture and shiny···*P.* (*Heteroglossa*) *formosanus* JEDLIČKA
   Distribution. Japan: Honshu—Kamiube, Ube, Yamaguchi Pref. (KAORU TANAKA leg.), introduced?; Satsunans. Formosa.

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A New *Ischnodactylus*-species from Japan. (Coleoptera, Tenebrionidae)

By Kiyoshi Ando

At the beginning of the present paper, I wish to express my hearty thanks to Mr. Taichi Shibata for his constant guidance and helpful suggestion in literature and materials; to Mr. Michitaka Chûjô for his kind assistances in literature and many materials; to Drs. Syusiro Ito, Sigeru Moriuti, Masao Hayashi, Yoshihiko Kurosawa, Shinsaku Kimoto, Messrs. Masafumi Ohkura, Hiroshi Ishida, Yorio Miyatake for their very kind help in literature and various ways. I am also greatly indebted to the members of the Osaka Coleopterological Society for their deep kindness given me in materials and valuable advices.

Ischnodactylus iriomotensis sp. nov.

Oval, flatly convex above; shiny, dark reddish brown, but mouth parts, apical part of clypeus, antennae, pronotum, sutural and side margins of elytra and legs light reddish brown; each elytron with two yellow transverse spots, of anterior spot narrow, occupying at basal one-fourth from 3rd to 5th intervals, and constricted in middle, but sometimes divided into two small and oblong spots on each 3rd and 5th intervals, posterior spot rectangular, oblique toward apex

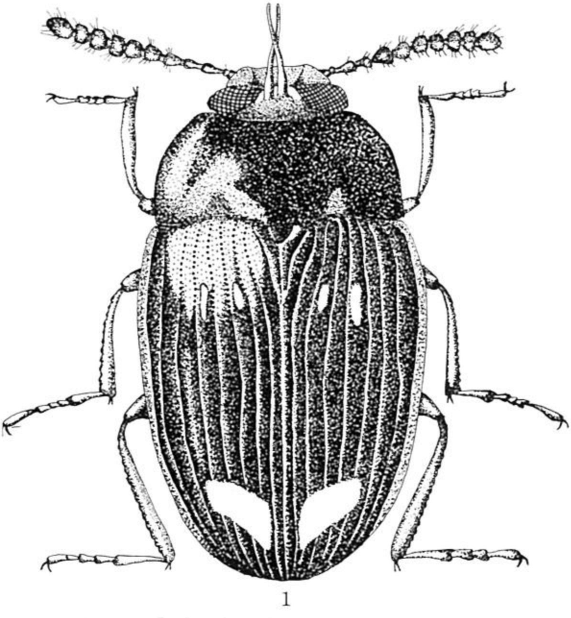

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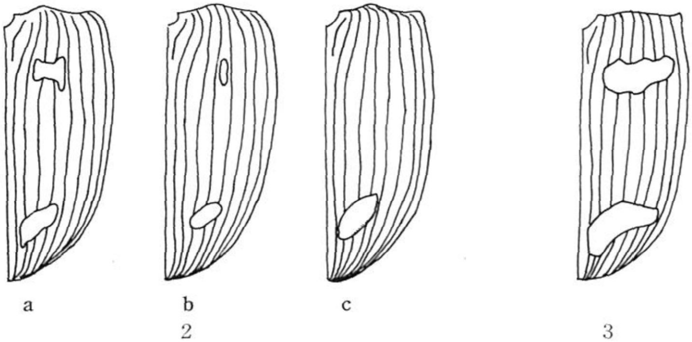
Fig. 1. *Ischnodactylus iriomotensis* sp. nov.

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 81–84, Dec., 1978〕



Figs. 2–3. 2. *Ischnodactylus iriomotensis* sp. nov. (a–c: Variation of elytral pattern). 3. *I. bisbifasciatus* GEBIEN.

and occupying at apical one-fourth from 2nd to 6th or 7th intervals; these spots reduced and often only traceable or vanished (fig. 2).

Head hexagonal, in ♂ flattened above with a pair of slender, horizontal horns on vertex, horns variable in form, furcate at apical one-third, and bending down in lateral view, but in ill-developed ♂ only with a pair of weak elevations; clypeus trapezoidal, a little convex in middle, coarsely and densely punctate, longitudinally and strongly impressed at sides, its front margin of ♂ truncate and of ♀ feebly arcuate, clypeal suture fine, clearly separating clypeus from frons; frons in ♂ sparingly and minutely punctate under horns, sculpture of vertex and occiput like on clypeus, frons in ♀ convex with a weak median line, its punctures coarser and a little denser than on clypeus. Eyes relatively large, its diameter more than twice as long as space between them. Antennae fully cross over basal margin of pronotum, 1st segment robust, subequal in length to 3rd or 4th, 2nd shortest, 3rd cylindrical, 3rd and 4th individually longer than wide, 4th dilated apically and to 11th subequal in width, 11th oval and longer than wide; 3rd segment in ♀ a little shorter than 4th. Terminal segment of maxillary palpi subsecuriform and obliquely truncate at apex. Mentum oval, in ♂ with a usual large cavity which pubescent in middle, in ♀ shallowly depressed. Gular coarsely and densely punctate and weakly impressed along middle.

Pronotum somewhat uneven, wider than long in ♂ (25 : 11), much wider in ♀ (33 : 12), its punctures finer and sparser than on clypeus; apical margin emarginate and bordered, lateral margins also bordered, gently arcuate in basal two-thirds and then strongly narrowed toward apex, basal margin unbordered, weakly bisinuate and widely produced behind in middle, apical angles rounded and weakly produced forward, basal ones obtusely angulate; basal foveae fine.

Scutellum small, subtriangular in ♂, but semicircular in ♀.

Elytra elliptic oval, gently narrowed behind, widest at basal one-fourth and a little wider than pronotum, with scarcely visible microsculpture; punctures in striae strong and deep, intervals almost flat, but convex on lateral and apical parts, minutely and sparingly punctate; scutellary striole short.

Undersurface evenly and scantily pubescent; prosternum coarsely punctate and weakly strigose, propleuron coarsely and sparingly punctate, but punctures rather numerous inside and almost impunctate on outer deflexed area, prosternal process tongue-shaped and acuminate at apex; mesosternum shallowly, coarsely punctate and hollowed in V-shape, mesepimeron minutely and sparingly punctate and less shiny; metasternum sparingly and coarsely punctate on front half. Abdominal 1st to 3rd segments finely and rather densely punctate in middle, but coarsely and sparingly punctate on lateral sides except their impunctate hind margins with distinct, strong and longitudinal wrinkles, last two segments minutely and sparingly punctate. Tibiae weakly incurved, slightly thickened apically and pubescent, outer margins of middle and hind tibiae finely crenulate; all tarsi pubescent, 1st segment of front and middle tarsi longer than following three segments together, terminal segment of hind tarsi in ♀ relatively long, a little longer than preceding two segments together (while in *bisbifasciatus* shorter), length in proportion of respective tarsi as follows: Front tarsi in ♂ 10 : 4 : 3 : 2.5 : 13, in ♀ 10 : 3 : 3 : 2.5 : 10; middle tarsi in ♂ 14 : 5 : 4 : 4 : 13, in ♀ 13 : 4 : 4 : 3 : 12; hind tarsi in ♂ 24 : 8 : 5 : 14, in ♀ 23 : 7 : 6 : 14.

Male genitalia slender, subparallel-sided except basal part and acuminate at apex, evenly arcuate ventrally in lateral view, apex of paramere a little more angulate than those of *bisbifasciatus*.

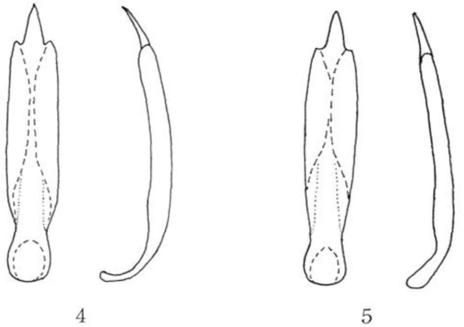


Fig.s 4–5. Male genitalia of *Ischnodactylus* spp. 4. *I. iriomotensis* sp. nov. 5. *I. bisbifasciatus* GEBIEN.

Length : 4.0–5.9 mm. Width : 2.0–3.0 mm.

Holotype : ♂, Iriomote Is., Okinawa Pref., 31. VII. 1964, T. ITO leg. (in T. SHIBATA coll.). Paratypes : 1 ♂ 3 ♀♀, same data as holotype ; 3 ♀♀, ditto, M. YASUI leg. ; 2 ♂♂ 1 ♀, Mt. Tedou, Iriomote Is., Okinawa Pref., 22. VII. 1963, Y. HAMA leg. ; 17 ♂♂ 23 ♀♀, Nakara River, Iriomote Is., Okinawa Pref., 25–28. VI. 1970, and 2 ♀♀, Shirahama, Iriomote Is., Okinawa Pref., 29–30. VI. 1970, H. MAKIHARA leg. (In Dept. Agr., Kyushu Univ. coll.).

The present species is very closely allied to *I. bisbifasciatus* GEBIEN, 1925 from Taiwan, but distinguished from the latter by the following characters: General coloration dark reddish brown instead of black, elytral pattern reduced, not developed; scutellary storiole more regularly punctate; abdominal segments more distinctly and strongly wrinkled; terminal segment of hind tarsi in ♀ longer than two precedings together, while those in the same sex of the latter a little shorter; the male genitalia evenly arched ventrally, not straight as in the latter and apex of paramere more angulate.

Notes on the Genus *Pidonia* MULSANT from Taiwan, II.[1] (Coleoptera, Cerambycidae)

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The species of the genus *Pidonia* occur mainly in the temperate zone of the Holarctic Region, and more than 60 species have been known to belong to this genus. Up to the present eight species have been described or recorded from Taiwan. The study of the Formosan fauna remains still quite insufficent, despite its importance in analysing the origin of the Japanese fauna.

Since 1976, I have been studied the Taiwanese *Pidonia*-species on the basis of a number of specimens obtained during my surveys. A new species has been described from the high altitudes of the Central Taiwan, under the name of *P. paradisiacola* KUBOKI, 1977. In the present paper, descriptions of a new species and a new status are dealt in following pages.

Before going further, I wish to express my hearty thanks to Professor HIROMASA SAWADA, Prof. NOBUO GOKAN and Ass. Prof. YASUAKI WATANABE, Tokyo University of Agriculture, for their constant guidance and helpful suggestions. I am also indebted to Prof. MASAO HAYASHI, Osaka Jonan Women's Junior College, for his kindness given me in various ways and to Prof. CHONG-ZHI KUAN, Taiwan Provincial Chung-Hsieng University, for his valuable assistance during my collecting trips in Taiwan. Besides, I am grateful to Messrs. S. IMASAKA, H. MAKIHARA, K. MATSUDA and N. OHBAYASHI for their kindness supplying with the materials.

Pidonia (*Pidonia*) *meridionalis* sp. nov.

(Pl. 2, figs. 1-2; text figs. 5-8)

Body relatively large, elongate and furnished with fine pale fulvous pubescence.

Length: 10.0-10.8 mm (male), 8.3-10.2 mm (female); breadth: 2.1-2.3 mm (male), 2.0-2.5 mm (female).

Color. Male: Body yellowish fulvous to dark brown, head reddish fulvous, mouthparts yellowish brown except for reddish brown apex of

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[1] The part I of this paper was published in Ent. Rev. Japan, 30 (1/2): 31-34, Oct., 1977.

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 85-92, pl. 2, Dec., 1978〕

each mandible, eyes black, antennae largely yellowish brown, infuscated from third segment at their apices, the black portions gradually enlarged apically, prothorax variable, reddish brown to dark brown, scutellum reddish fulvous, legs brownish yellow, femora dark brown apically, tibiae, tarsi and claws dark brown, elytra yellowish fulvous with black marking, ventral surfaces of head, thorax and abdomen largely yellowish fulvous, breast darkened and base of first and second each sternite dark, though not entirely black. Elytral markings: basal marking narrowly present, sutural marking distinctly present, terminating behind elytral apex, apical marking present, latero-basal marking prolonged towards shoulder, latero-basal, -median and -posterior markings always fused with one another, forming a longitudinal vitta.

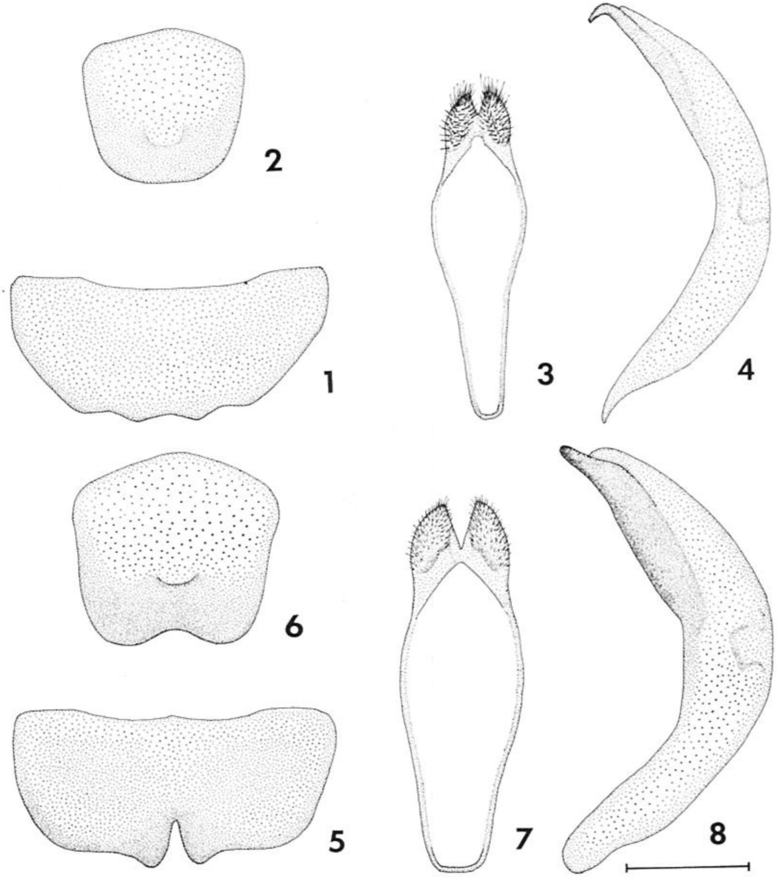
Female: Body coloration and markings distinctly develop in female than in male; maxillary palpus and labial palpus brown, antennae largely brown, scape reddish fulvous, prothorax almost black with reddish yellow apex and base, elytral marking variable, having a pair of longitudinal dark yellowish brown discal vittae to entirely black, ventral surfaces of head, thorax and abdomen largely yellowish fulvous except for a pair of dark spot on first and second sternites laterally and dark breast.

Structure. Head subquadrate and a little broader across eyes than basal width of prothorax (male, 1.18 : 1; female, 1.07 : 1); tempora slightly narrowed in anterior half and abruptly in posterior half, almost impunctate and shining with relatively solid pubescence towards front; frons subvertical and transverse, covered with thin punctures, bearing a fine but distinct median longitudinal furrow extending backwards to near vertex; antennal tubercles weakly raised; vertex coarsely punctured. Eyes relatively prominent, moderately faceted, strongly emarginate at middle of internal margin. Antennae inserted just behind level across frontal margin of eyes, distinctly (male) or slightly (female) longer than body; first segment dilated towards apex, distinctly shorter than third segment, which is longer than fourth and a little longer than (male) or nearly as long as (female) basal two segments taken together, fourth segment is shorter than sixth segment, fifth the longest.

Prothorax longer than width (male, 1.22 : 1; female, 1.06 : 1), strongly constricted both behind apex and before base, and angulately prominent laterally just before middle; base distinctly narrower than the breadth across the prominent portions (1 : 1.06) and distinctly broader than apex (male, 1 : 1.47; female, 1 : 1.54); disk convex above, with a longitudinal shining line along middle before the level of basal constriction, finely and closely punctured, sparsely clothed with very fine short pubescence.

Scutellum small and triangular, slightly longer than broad, bearing thin pubescence on the surface. Elytra elongate, 2.95 times (male) or 2.63 times (female) as long as the basal width, gradually narrowed posteriorly (male) or almost parallel-sided (female), and separately subtruncate at apices; surface closely and deeply punctured and densely clothed with suberect pubescence; interspace between punctures broader than the diameter of each puncture.

Legs relatively slender; femora clavate; hind femora not reaching elytral apex in both sexes; tibiae linear; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus longer



Figs. 1–8. 1–4. *Pidonia occipitalis* (GRESSITT), ♂; 5–8. *P. meridionalis* sp. nov., ♂. 1, 5. Fifth visible abdominal sternite. 2, 6. Fifth visible abdominal tergite. 3, 7. Lateral lobes. 4, 8. Median lobe. Scale: 0.5 mm.

than the following two taken together (1 : 0.78); third segment strongly dilated apically and deeply emarginate at middle of apex.

Abdomen elongate and gradually convergent towards apex; surface of each sternite densely covered with extremely fine pubescence; in male, fifth visible sternite obtusely, deeply emarginate at middle of hind margin (Fig. 5), last visible tergite emarginate at middle of hind margin (Fig. 6); in female, fifth visible sternite simple, last visible tergite very shallowly retuse at middle of hind margin.

Male genital organ strongly sclerotized; median lobe relatively thick, curved ventrally and obtusely pointed at apex (Fig. 8); lateral lobes shorter than median lobe, cuneately parted and separated from each other in apical half, each apex produced and sparsely with relatively short terminal hairs (Fig. 7).

Type-series. Holotype: ♂, allotype: ♀, 19. V. 1976, Tsifeng (about 2,300 m in alt.), Nantou Hsien, M. Kuboki leg. Paratypes: 2 ♂♂, 1 ♀, same data as the holotype; 2♂♂, 2♀♀, 20. V. 1976, Tsifeng, M. Kuboki leg.; 3♂♂, 2♀♀, 7. V. 1978, Tienchi (about 2,200 m in alt.), Kaohsiung Hsien, M. Kuboki leg.; 2 ♂♂, 2 ♀♀, 8. V. 1978, same locality and leg.; 1♂, 1 ♀, 8. V. 1978, Likuan (about 2,000 m in alt.), Kaohsiung Hsien, M. Kuboki leg.

The holo- and allotypes are preserved in the Laboratory of Entomology, Tokyo University of Agriculture. Paratypes are deposited in the writer's collection.

Distribution. Taiwan.

Flight period. May.

Remarks. This species has been confused with *P. occipitalis* (Gressitt), but can be easily distinguished by the following key:—

1. Body relatively medium to large (6.8–9.7 mm); prothorax dully constricted both behind apex and before base, dully prominent laterally across the prominent portions; in male fifth visible sternite very slightly emarginate triangularly at middle of hind margin (Fig. 1), last visible tergite rotundate or weakly mucronate at middle of hind margin (Fig. 2); in female fifth visible sternite simple, last visible tergite rotundate or weakly mucronate at middle of hind margin; male genital organ moderately sclerotized, median lobe relatively slender, strongly sclerotized, caudately pointed and bending inward at apex (Fig. 4), lateral lobes cuneately cleft and separated from each other in apical half, each apex produced and densely with relatively long terminal hairs (Fig. 3)·· *P. occipitalis* (Gressitt)

— Body relatively large (8.3–10.8 mm); prothorax strongly constricted both behind apex and before base, angulately prominent laterally across the prominent portions; in male fifth visible sternite obtusely, deeply emarginate at middle of hind margin (Fig. 5), last visible tergite emarginate at middle of hind margin (Fig. 6); in female fifth visible sternite simple, last visible tergite very shallowly retuse at middle of hind margin; male genital organ strongly sclerotized, obtusely pointed at apex (Fig. 8), lateral lobes cuneately parted and separated from each other in apical half, each apex produced and sparsely with relatively short terminal hairs (Fig. 7)··· *P. meridionalis* sp. nov.

Pidonia (*Mumon*) *formosana* TAMANUKI et MITONO, 1939, new status

(Pl. 2, fig. 4; text figs. 11–12)

Pidonia (*Pseudopidonia*) *debilis* subsp. *formosana* TAMANUKI et MITONO, 1939, Tr. Nat Hist. Soc. Formosa, 29 (191): 208 (Arisan).

Pidonia (*Mumon*) *debilis formosana*: HAYASHI, 1968, Bull. Osaka Jonan Women's Jr. Coll., 3: 17.

Body small, relatively rotundate and furnished with fine pale fulvous pubescence.

Length: 6.7–7.7 mm (male), 7.0–8.0 mm (female); breadth: 1.7–2.1 mm (male), 1.9–2.3 mm (female).

Color. Body reddish brown to brownish yellow, more darkened in female than in male; head, prothorax and scutellum reddish brown; mouthparts reddish fulvous except for reddish brown apex of each mandible and maxillary palpus; eyes black; scape and pedicel reddish fulvous, third and the following joints blackish brown, sometimes brownish yellow; elytra brownish yellow, with no markings; apical halves of hind femora, each tibiae and tarsus dark brown, sometimes brownish yellow, underside of femora sometimes darker than the dorsum, claws reddish brown; undersides of head, thorax and abdomen entirely reddish fulvous.

Structure. Head a little broader across eyes than prothorax (male, 1.09 : 1; female, 1.03 : 1); tempora slightly narrowed in anterior half and gently constricted in posterior half, almost impunctate and shining with solid pubescence forwards to near vertex; antennal tubercles weakly raised; vertex and occiput coarsely punctured and shining, sparsely clothed with fine, short pubescence. Eyes prominent, moderately faceted, weakly emarginate at middle of internal margin. Antennae slender, inserted between eyes, barely exceeding apical end of body (male) or hardly attaining elytral apex (female); first segment distinctly dilated towards apex, distinctly shorter than third segment, which longer than fourth and equal in length of basal two segments taken together, fifth the longest.

Prothorax distinctly (male, 1.14 : 1) or slightly (female, 1.01 : 1) longer than basal width, weakly constricted both behind apex and before base, and dully expanded laterally just before middle; the breadth across the expanded portions being narrower than base (male, 0.92 : 1; female, 0.91 : 1); apical margin obviously narrower than base (male, 0.66 : 1; female, 0.63 : 1); disk convex above, sparsely punctate, sparsely clothed with fine, short, appressed pubescence.

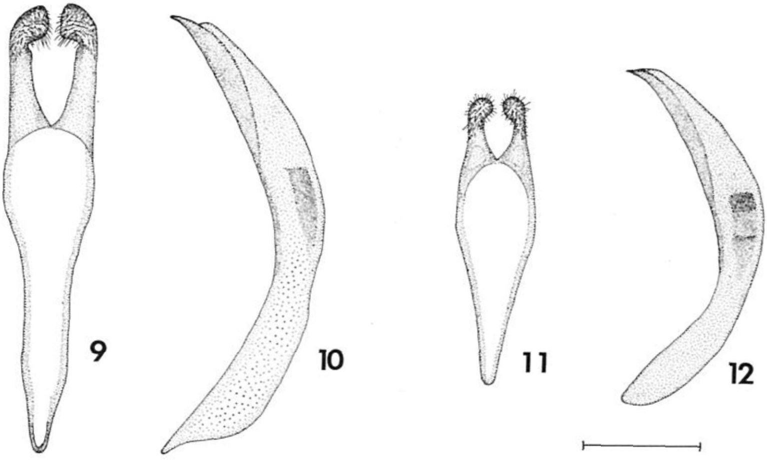
Scutellum small and triangular, slightly longer than breadth, bearing thin pubescence on the surface. Elytra rotundate, 2.42 times (male) or 2.25 times (female) as long as basal width, gradually narrowed posteriorly (male) or almost parallel-sided (female), and separately rounded at apices; surface finely closely punctate and sparsely clothed with suberect pubescence; interspace between punctures narrower than the diameter of each puncture.

Legs relatively slender; femora weakly clavate, hind femora reaching elytral apex in both sexes; tibiae linear; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus distinctly longer than the following two taken together (male, 1 : 0.72; female, 1 : 0.68); third segment strongly dilated apically and deeply emarginate at middle of apex.

Abdomen elongate and gradually convergent towards apex; surface of each sternite densely covered with extremely fine pubescence; in male, fifth visible sternite very shallowly emarginate at middle of hind margin, last visible tergite simple; in female, fifth visible sternite simple, last visible tergite simple.

Male genital organ moderately sclerotized; median lobe relatively curved ventrally and acutely pointed at apex (Fig. 12); lateral lobes distinctly shorter than median lobe, each apex long, slender, weakly bending inwards and with relatively short terminal hairs (Fig. 11).

Specimens examined. 3♂♂, 2♀♀, 7. V. 1978, Tienchi (2,200 m in alt.), Kaohsiung Hsien, M. KUBOKI leg.; 2♂♂, 1♀, 8. V. 1978, same locality and leg.; 1♂, 10. VI. 1938, Mt. Arisan (2,200 m in alt.), Chai Hsien, H. INOUE leg.; 1♂, 1. V. 1973, same locality as above, S. IMASAKA leg.; 9♂♂, 2♀♀, 1. V. 1976, Sungkang (2,050 m in



Figs. 9–12. 9–10. *Pidonia debilis* (KRAATZ); 11–12. *Pidonia formosana* TAMANUKI et MITONO.
9, 11. Lateral lobes of male. 10, 12. Median lobe of male. Scale: 0.5 mm.

alt.), Nantou Hsien, M. KUBOKI leg.; 5 ♂♂, 2 ♀♀, 7. V. 1976, same locality as above, M. KUBOKI leg.; 6 ♂♂, 4 ♀♀, 10. V. 1967, Meifeng (2,200 m in alt.), Nantou Hsien, M. KUBOKI leg.; 3 ♂♂, 1 ♀, 18. V. 1976, same locality as above, M. KUBOKI leg.; 23 ♂♂, 8 ♀♀, 20. V. 1976, Tsifeng (2,300 m in alt.), Nantou Hsien, M. KUBOKI leg.; 8 ♂♂, 3 ♀♀, 1. VI. 1976, same locality as above, M. KUBOKI leg.; 3 ♂♂, 1 ♀, 25. VI. 1976, Hohuanchi-Sungchuankang, Nantou Hsien, H. MAKIHARA leg.

Distribution. Taiwan.

Flight period. April to June.

Remarks. This species has been confused with *P. debilis* (KRAATZ), but can be easily distinguished by the following key:—

1. Head, prothorax and scutellum yellowish brown, antennae yellowish brown except for apices of third and the succeeding joints blackish brown; apices of hind femora, hind tibiae and each tarsus dark brown; the breadth of prothorax across the expanded portions being equal to base; elytra 2.52 times (male) or 2.35 times (female) as long as basal width; interspace between punctures broader than the diameter of each puncture; male genital organ moderately large, median lobe weakly curved ventrally (Fig. 10), lateral lobes nearly as long as median lobe, each apex long, slender, strongly bending inwards (Fig. 9) ································· *P. debilis* (KRAATZ)

— Head, prothorax and scutellum reddish brown; scape and pedicel reddish fulvous, third and the following joints blackish brown; apical halves of hind femora, each tibia and tarsus dark brown to blackish brown, claws reddish brown; the breadth of prothorax across the expanded portions being narrower than base (male, 0.92 : 1; female, 0.91 : 1); elytra 2.41 times (male) or 2.25 times (female) as long as basal width; interspace between punctures narrower than the diameter of each puncture; male genital organ medium, median lobe strongly curved ventrally (Fig. 12), lateral lobes distinctly shorter than median lobe, each apex long, slender, weakly bending inwards (Fig. 11) ································· *P. formosana* TAMANUKI et MITONO

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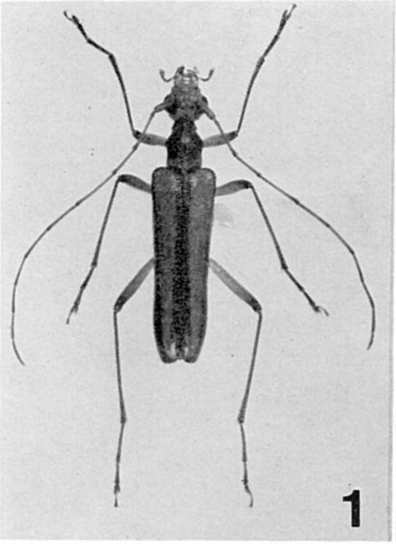
Explanation of Plate 2.

Fig. 1. *Pidonia meridionalis* sp. nov., ♂.
2. ditto, ♀.
3. *Pidonia debilis* (KRAATZ).
4. *Pidonia formosana* TAMANUKI et MITONO.



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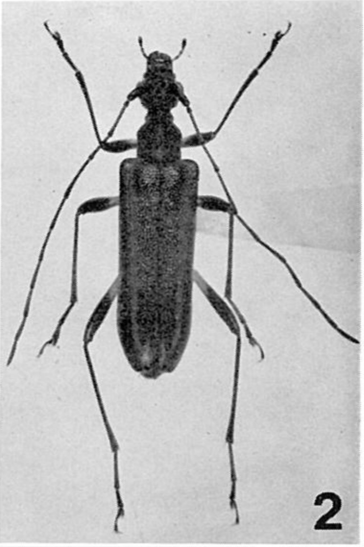

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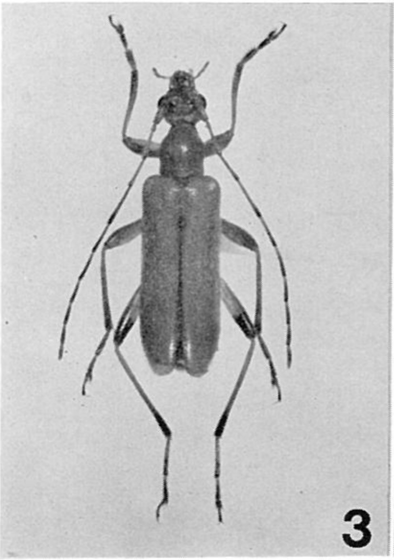

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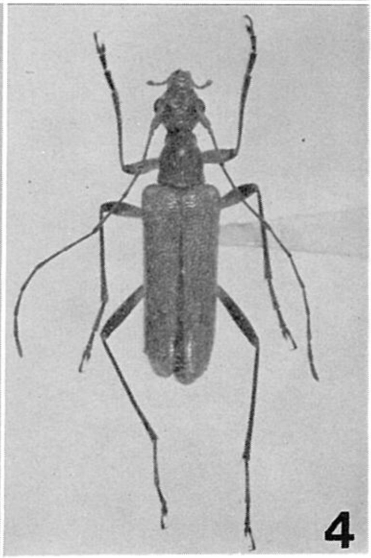

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(M. Kuboki photo.)

Reports of Anthribidae from Taiwan, II. (Coleoptera)

By Taichi Shibata

Rhaphitropis communis sp. nov.

Subcylindrical, brown to dark brown, elytra more or less reddish and tibiae paler, marked with grey to yellowish grey pubescence. On pronotum, spots variable in form but generally arranged as follows: a median line widened before middle and again at base beyond dorsal carina, two spots on each dorso-lateral side, one near apex and another basal, triangulate, both sometimes continuous to grey lateral side. Elytral pattern alike as in *R. convexipennis* or *vittatus*, sutural stripe wide, from base including scutellum to before middle, other stripes on alternate interspaces uninterrupted but which on 3rd interspace often lacking in basal part, and constantly developed anteapex, where turned laterad and connected with stripe of 9th, its transverse arch forming a subapical patch and often invaded sutural space, stripes on 5th and 7th stopping short just before the subapical patch.

Rostrum largely depressed, sculpture concealed by dense whity grey pubescence. Head very finely granulate, a spot on occiput and borders of eyes yellowish grey; frons convex, its space between eyes in ♂ subequal length of 3rd antennal joint, in ♀ a little wider. Eyes truncate in front. Antennae testaceous, somewhat darkened externally, moderately long, in ♂ fully cross over and in ♀ scarcely reaching elytral base, 3rd joint as long as 1st and 2nd together and longer than 4th, from 4th to 8th subequal in length, 7th and 8th slightly dilated to apex, club-joints elongate, usually wider than precedings, bearing fine and dense ciliae, in which 9th narrowly obconical, longest, a little longer than 3rd, 10th weakly rounded at lateral sides, a little shorter than 9th, 11th oblong, as long as 10th. False mentum light reddish brown, moderately emarginate in middle.

Pronotum a little wider at dorsal carina than long (1.2: 1), sides rounded and weakly narrowed at basal half, then rather strongly constricted forward; disc very finely granulate, antemedian depression shallow, but basal one distinct along dorsal carina, latter depression often yellowish grey; dorsal carina gently emarginate in middle and

[Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 93–99, Dec., 1978]

more or less angulate midway to sides, longitudinal carinulae not horizontal, inferior angle between dorsal and longitudinal carinula acute, basal slope moderate.

Elytra subquadrate, a little longer than basal width (1.75 : 1.2), which is a trifle shorter than widest space at dorsal carina of pronotum; base subtruncate or very weakly rounded, shoulder callus distinct, subbasal swellings scarcely indicated and slightly depressed behind; striae fine, distinct, deeply and regularly punctate, interspaces slightly convex, alternate ones more distinctly so, 2nd and 3rd of which somewhat wider than others, sculpture like pronotum. Pygidium in ♂ narrow, a little longer than basal width, in ♀ almost as long as wide, sculpture alike on pronotum, but intermixed with visible granules, which irregularly scattered in ♂, much more distinct and denser at apical half in ♀.

Under surface uniformly grey, granules more distinct and larger than on upper surface, mesosternal process truncate, metepisterna whity. Abdominal 1st to 3rd or 4th segments in ♂ longitudinally grooved in middle and with yellowish grey borders or weak carinulae on each side of groove. Midfemora simple in ♂.

Length (excl. head): 2.0–3.0 mm.

Holotype: ♂, Liukuei, Kaohsiung Hsien, 1. V. 1970, Y. Kiyoyama leg. (T. Shibata coll.); paratypes: 1♀, same as holotype; 7♂♂ 4♀♀, Nanshanchi, Nantou Hsien, IV–V. 1970–1974, Y. Hayashi, Y. Kiyoyama and S. Takeda leg.

The present species appears to be allied to *R. convexipennis* Jordan from Perak, but in the former the body is smaller, the antennae in ♀ are shorter, whose club-joints are different in relative length to each other. *R. vittatus* Jordan from Sumatra, Perak and Tonkin and *R. stevensi* Jordan from Nepal are rather nearer in elytral pattern and other character to the present species, however, they differ from the latter by the body is more cylindrical, the dorsal prothoracic carina more approaching laterally to base. The dorsal carina of the present species is a little more widely remote laterally and constantly separates in equal space throughout from the actual base.

Rhaphitropis carinatus sp. nov.

♂. Subcylindrical, likewise in profile as *R. communis,* but robuster, dark brown except reddish antennae, basal and apical parts of tibiae and all tarsi, spotted by whity grey to yellowish grey pubescence.

Rostrum depressed at apex, apical margin emarginate in middle and produced forward on either side, its produced lobe rounded and reflexed at extreme part; sculpture almost hidden by yellowish pubescence excluding bare apical side, where finely but roughly granulate. Head yellowish grey leaving occiput, which with a linear grey spot at middle; frons less convex than that of *communis*, space between eyes as wide as length of 3rd antennal joint. Eyes subtruncate in front. Antennae not reaching middle of elytra, 3rd joint longer than 1st and 2nd together, 4th shorter than 3rd, and to 6th equal in length to each other, 7th and 8th a little shorter than 4th, very slightly thickened apicad, club-joints elongate but relatively short, their form and manner alike as in *communis,* 9th and 10th subequal in length and as long as 8th, 11th a little shorter than 10th.

Pronotum robust, a little wider at dorsal carina than long (1.5 : 1.1), sides rounded and narrowed forward from dorsal carina, their subapical constriction weak; dorsal pattern similar to that in *communis,* but dorso-lateral spot on base divided into two parts, of inner part narrowly triangular, outer one elongate; disc finely granulate, antemedian depression very shallow; dorsal carina rounded-bisinuate, its median emargination apparently deepened, because each lateral part convexly raised forward and angulate, lateral extremity of carina a little nearer to actual base than in middle, inferior angle sharp and acute.

Elytral pattern alike as those of *R. gracilis* or *excavatus*, though the single example is not well preserved. Elytra longer than wide (2.2 : 1.5), and a little narrower than pronotum; base subtruncate, shoulder callus distinct, usually denuded, subbasal swellings vestigial, antemedian depression very shallow; punctate-striate, striae shallow, punctuations indistinctly impressed, interspaces slightly convex, with rough granules, which visibly larger than on pronotum. Pygidium triangulate, longer than wide, apex rounded.

Under surface evenly grey, metasternum with a batch of rough granules behind truncate mesosternal process, each lateral convexity more distinct than those of other species from Taiwan and Japan, apical middle parts of metasternum carinate before metacoxae and deeply excavate under carina, carina bare. Abdomen constricted as a rule, 1st and 2nd segments with a median deep furrow, its extension traceable on 3rd and 4th, and bordered by yellowish tomentum. Midfemur bearing a large, triangular carina at middle of inner-under side, its apex truncate.

Length (excl. head): 3.4 mm.

Holotype: ♂, Fenchifu, Chiai Hsien, 3. VI. 1970, Y. KIYOYAMA leg. (T. SHIBATA coll.).

The present species closely resembles the preceding one in profile and pattern, but the body is robuster, with the up-mentioned characteristic appendices of metasternum and midfemora in ♂. The male of *R. gracilis* JORDAN from Sumatra provides a strongly dilated carina on the midfemur and very similar pattern on the elytra, however, the carina itself with a minute tooth on proximal side and the antennae are much longer, arriving at the elytral apex. While in the present species the carina is also truncate but without tooth and the antennae are shorter, hardly reaching near middle of the elytra. The male of *R. coelodentatus* WOLFRUM from Borneo provides a large triangulate carina, but the carina is much larger, almost occupying the whole length of the midfemur, with a median excavation, moreover the 3rd antennal joint is not longer than the basal foregoings together. The male of *R. excavatus* WOLFRUM from Philippines provides a clear excavation on the metasternum and the abdomen, and provides well affinitive markings on the pronotum and the elytra, though the body is smaller (2.5 mm.), the antennae are much longer, subequal length of the body and the metasternum without carina on apical side.

Rhaphitropis pigmaeus sp. nov.

Body rather cylindrical, black or dark brown, with testaceous antennae, tibiae and tarsi, marked with grey to yellowish grey pubescence above. Markings on pronotum grey or more yellowish: a median line widened at base, narrowed forward beyond dorsal carina to apex, it connected with an antemedian transverse arch, here forming a cross-shaped mark if median line extended to apex, but the line sometimes abbreviated on apical area, transverse arch running obliquely toward latero-apical sides along antemedian depression, and joined grey lateral sides, two basal elongate spots on each side, when these spots well developed, continued to transverse arch or lateral side leaving a dark oblong spot. Elytral pattern nearly like *R. placidus,* viz. shoulder callosities and their hind areas, subbasal swellings, median irregular transverse band and subapical parts constantly black to dark brown.

Rostrum shallowly depressed at apex, almost flat and forming a plane with frons. Head narrow, uniformly grey as well as rostrum, exclusive of occiput, which very finely granulate; frons flat, space between eyes in ♂ narrow, visibly shorter than 3rd antennal joint, in ♀ much wider, a little longer than 3rd. Eyes approximating each other in ♂, subtruncate on front side. Antennae in ♂ reaching middle of elytra, 3rd joint as long as 1st and 2nd together and longer than 4th, from 4th to 7th subequal in length, 8th a little shorter than foregoings, nearly as long as 9th or 11th, and a trifle longer than 10th; in ♀ short, scarcely arrived at elytral base, 3rd longest, 4th to 11th subequal in length to each other. False mentum testaceous, darkened in middle, apical emargination rather deep.

Pronotum subconical, nearly as long as wide at dorsal carina, sides strongly convergent forward in apical third and very weakly sinuate before carina; disc very finely granulate, antemedian depression moderate, basal one distinct; dorsal carina visibly undulate, gently emarginate in middle, rather sharply angulate at lateral convex parts, and lateral extreme tips somewhat deflexed laterally, so inferior angle acute, basal slope moderate.

Elytra longer than wide (1.8 : 1.1) and as wide as pronotum; base subtruncate or weakly rounded, shoulder callus not very distinct, subbasal swellings hardly indicated, striae deep, punctuations large and deep, interspaces slightly convex, densely and roughly granulate. Pygidium triangular, in ♂ as long as wide, in ♀ a little wider than long, more widely rounded than in ♂ and with large granules, especially on apical part.

Under surface grey, metepisterna densely covered with whity grey, mesosternal process truncate. Abdomen in ♂ not constricted and simple, but with a trace of median groove on 1st segment in holotype. Midfemora in ♂ without appendix beneath.

Length (excl. head): 2.1-2.3 mm.

Holotype: ♂, Nanshanchi, Nantou Hsien, 3. V. 1971, Y. HAYASHI leg. (T. SHIBATA coll.); paratypes: 1 ♂, ditto, 6. V. 1971, Y. HAYASHI leg.; 1♀, ditto, 27. VI. 1971, Y. MAEDA leg.

The present species differs from the preceding two species by the smaller and more cylindrical body, the narrower frons of ♂ and unlike markings on the upper surface, etc. *R. oblongus* JORDAN from Philippines and *R. placidus* JORDAN from Perak are somewhat related to the present species by the narrow or less convex frons and the markings above, but the distinction among them is as the following antennal proportion in ♂ : in *oblongus*, the 9th joint is nearly twice as long as the 10th, in *placidus*, the 9th is equal length of the 3rd, the 10th is also equal to 8th, while in the present species, the 9th is clearly shorter than 3rd and a trifle longer than 10th, which is a little shorter than 8th. The former two species have no transverse band on the centre of the pronotal disc, but the present species has a band on the same position, therefore the central mark is a cruciform as that of *R. capucinus* JORDAN from Perak and Borneo, whose frons is evidently elevated and the metathoracic femur of ♂ with a carina on under side. In the present species the frons is almost flat and the femora of ♂ without any sexual appendix.

Rhaphitropis cylindricus sp. nov.

♂. Cylindrical, narrow, blackish brown, antennae dull black, tibiae and tarsi reddish brown, spotted by yellowish grey pubescence above. On pronotum: a median spot on base, a little extended forward across dorsal carina and here almost obliterated, but reappearing at middle; a rounded apical spot and a linear or narrowly triangulate basal spot on each dorso-lateral side, former prominent, often joined grey lateral extreme area, latter spot on proximal base, small, not so widely dilated as that of *R. guttifer*. On elytra: a wide sutural spot between subbasal swellings from base including scutellum prolonged behind, it ends in antemedian depression, where not expanded laterally and constantly limited on both 2nd interspaces, that of *guttifer* expanded laterad or obliquely extended apicad and widely confused with spots on other interspaces;

two or three spots on each alternate interspace excluding 9th, all spots small and compact, in which a hind one of 3rd interspace before apical declivity more or less lengthened and predominant than others; a humeral spot inside shoulder callus and a subapical patch smaller than in *guttifer*.

Rostrum weakly dilated upon antennal scrobes and shallowly depressed at apex, depression not distinctly transverse, somewhat deepened in middle, the depression of *guttifer* transverse, a little more distinct. Rostrum and head finely granulate, pubescence thinly grey to yellowish grey, but on lateral sides upon antennal scrobes thicker, also in front of eyes. Frons slightly convex, its width between eyes subequal length of 3rd antennal joint. Eyes slightly emarginate at front side. Antennae long, almost touching elytral apex, apices of some basal joints reddish, 3rd as long as 1st and 2nd together, 4th a little shorter than 3rd, both slender, narrow, rest gradually increasing in length and width to 7th, which with distal remainders, forming a thick elongate club, 8th nearly as long as 3rd, 9th or 7th, or a little shorter than 7th, 9th narrowly triangular, a little longer than succeeding respective joint, these three with fine pubescence beneath. False mentum deeply emarginate in middle.

Pronotum narrow, nearly as long as wide at dorsal carina, or a trifle wider than long (1.1 : 1, while the ratio in *guttifer,* 1.2 : 1), and comparatively large against elytra as in *guttifer,* lateral sides gently, rather straightly narrowed to apex, but those of *guttifer* more or less rounded and somewhat strongly convergent forward; disc finely granulate, antemedian and basal depressions indistinct; dorsal carina bisinuate, rather acutely emarginate in middle, slanting space to actual base wide as in *guttifer*, inferior angle sharp.

Elytra nearly twice as long as wide (2 : 1.1), a little more elongate than in *guttifer,* and subequal in width to pronotum; base truncate, shoulder callus weak, subbasal swellings indicated; striae deep, their punctuations large and deep, interspaces flat and wide internally, narrow and weakly convex externally, granules roughened. Pygidium triangular, rounded at apex.

Under surface grey, metepisterna thickly whitish grey, mesocoxae more approaching each other than those of preceding three species, so mesosternal process between them narrow, not truncate and triangularly rounded at apex as that of *guttifer*. Abdomen constricted, 1st to 4th segments longitudinally grooved along middle. Midfemur weakly dilated inside beneath as like as in *guttifer*.

Length (excl. head): 2.5–2.6 mm.

Holotype: ♂, Nanshanchi, Nantou Hsien, 26. VI. 1972, Y. KIYOYAMA leg. (T.

SHIBATA coll.); paratype, 1♂, Lushan, Nantou Hsien, 19. IX. 1970, Y. KIYOYAMA leg.

Most nearly allied in its cylindrical form and dorsal pattern to *R. guttifer* SHARP from Japan, in addition to the several different points as individually up-mentioned in the description, it may be separable by the following antennal relative length of ♂: the 4th to 6th and 8th joints of *guttifer* are all nearly equal in length, the 8th is constantly short, a little shorter than 7th or 9th; while in the present species the joints gradually increasing in length from 4th to 7th, the 8th is as long as 9th, not visibly shorter than 9th or 7th. The body of the Japanese species is almost black, more compact and a little wider, whose dorsal spots showing a tendency to expand on the elytra.

Rhaphitropis guttifer taiwanus ssp. nov.

The present subspecies is distinguishable from the nominate one by the followings: body dull blackish brown, pubescence on upper surface various, whity grey (holotype) to yellowish grey (paratype) and mixed with more yellowish one; two dorso-lateral spots on base of pronotum extended forward, sometimes continuous to grey lateral side or latero-apical spot, which always dilated; all spots on elytra much thicker, respectively developed and well-defined, not confusing everywhere and not widely diffused as in the nominate subspecies, in which linear spots of alternate interspaces more prolonged forward, consequently dark basal areas much smaller and narrower, only indicated by two rounded basal spots including subbasal swellings, sutural spot not transversely expanded or obliquely so behind, therefore middle common area on elytra never widely and vaguely whitish grey as in the nominate subspecies; apical transverse depression of rostrum shallower, median emargination and its lateral convex parts of prothoracic carina distinctly angulate; antennae in ♂ much shorter, though in single example, hardly reaching middle of elytra; elytral striae more finely but deeply impressed, especially in external ones, their punctuations smaller and not apparently coarsened, alternate interspaces somewhat convex, at least their inner ones not entirely flattened as in the nominate subspecies.

Holotype: ♂, Kentingkunyen, Pintung Hsien, 21. V. 1970, Y. KIYOYAMA leg. (T. SHIBATA coll.); paratype, 1♀, ditto, 12. IV. 1971, S. TAKEDA leg.

Yukihikous minobusanus, Gen. et Sp. Nov. (Platynini), from Central Honshu, Japan (Coleoptera, Carabidae)

By Akinobu Habu

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Quite recently Mr. Yukihiko Hirano who is keenly studying the fauna of Mt. Hakone and its surrounding districts brought me a Carabid specimen of a depigmented species. He found it under rather a large stone in Mt. Minobu which is about 25 km west of Mt. Fuji.

Aside from depigmentation this species rather reminds of the European *Abax* of the Pterostichini in the form of the pronotum and the basal part of the elytra, but the epipleurae of the elytra not contorted at the apical sinuation although an inner plica is present and the shorter hind trochanters point out its being none other than a species of the Platynini.

It seems to have some relationship to the cavernicolous *Jujiroa,* but it undoubtedly belongs to a different genus, and therefore I establish a new genus before describing it.

Here my sincere thanks are offered to Mr. Y. Hirano for his kindly giving me an opportunity to study this interesting species and allowing me to preserve the specimen (holotype) in our laboratory.

Yukihikous gen. nov. (Platynina)

Type-species: *Yukihikous minobusanus* sp. nov. from Japan.

Description. Body glabrous, depigmented, elytra not metallic, dorsal side flatter than in *Jujiroa.* Head (Fig. 3) shorter than in *Jujiroa,* strongly rugose on lateral sides (tempora) and ventral side; neck-constriction indistinct on lateral and dorsal sides, therefore neck also indistinct; tempora not developed, almost as long as eyes, not oblique behind eyes but almost parallel; eyes small, almost flat, apparent ventral margin fully widely distant from buccal fissures; two pairs of supraorbital setae present, posterior setae fully behind level of hind margin of eyes;

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 101–106, Dec., 1978〕

antennae long, but not so long as in *Jujiroa*, pubescent from segment 4, segment 1 rather elongate, narrowed at basal part, segment 2 without additional setae; mandibles slender, longer than in *Jujiroa*, porrect part of left mandible fully longer than labrum; labrum fairly emarginate at apex; palpi slender; mentum (Fig. 4) 4-setose, ordinary setae before pits, a little distant from pits, secondary setae long, fully before level of ordinary setae, pits fully large and deep, adjoining base of mentum, finely bordered, tooth wide, well bifid; submentum (Fig. 4) bisetose on either side. Pronotum (Fig. 2) not cordate but somewhat trapezoid, lateral margins only feebly contracted posteriorly; apex not distinctly bordered; apical angles fully protrudent; base not well bordered; basal angles distinctly angulate; lateral margins rather bordered at posterior half, thick as compared with those of *Jujiroa*, bisetose on either side; lateral reflexed areas narrower than in *Jujiroa*, but more distinctly defined by rather distinct groove; basal foveae well extending anteriorly. Wings fully reduced. Elytra not punctate, wider at base than usual; basal border (Fig. 7) vestigial on interval 1, arising from base of stria 2; shoulder (Fig. 7) fairly squared, somewhat reflexed; apex (Fig. 8) truncate, not mucronate; basal pore absent; stria 1 (Fig. 7) effaced at basal area; scutellary striole fully short, vestigial; interval 3 with only single pore at about middle, pore adjoining stria 2; apical and subapical pores (Fig. 8) normal in position, interval 1 without additional pore at apical area. Legs shorter than in *Jujiroa*, hind tarsi fairly longer than head width; hind coxae without

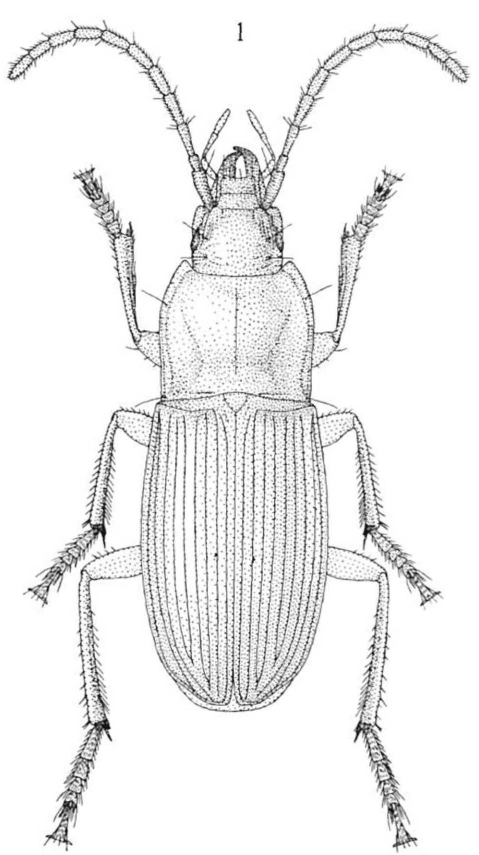


Fig. 1. *Yukihikous minobusanus* gen. et sp. nov., ♂.

inner seta, viz. bisetose; hind femora bisetose; fore tibiae longitudinally, well sulcate; mid tibiae of ♂ not tuberculose on inner side; tarsi wider than in *Jujiroa*, longitudinally, well sulcate and carinate on dorsal side of segments 1 to 5; basal three segments of fore tarsi of ♂ with adhessive hairs on ventral side; segment 4 of fore and mid tarsi with long, somewhat unequal lobes, longer lobe fully longer than (twice as long as in fore tarsi) median length of segment 4; segment 4 of hind tarsi (Fig. 5) with somewhat long, slightly unequal lobes, with fully long outer and inner apical setae, without subapical setae, outer lobe oblique at apex in lateral view, outer apical seta distinctly separated from ventral setae; tarsal segment 5 (Fig. 6) with one pair of developed secondary setae inserted rectilinearly at subapical area on dorsal side, glabrous and longitudinally sulcate-carinate on ventral side; claws simple. Prosternal process distinctly x-shaped, glabrous; mesepimera normal; metepisterna short; sternites not pubescent, sternites 3 to 5 with single seta on either side, sternite 6 widely truncate and with single seta at apex on either side. Aedeagus (Fig. 9) not rugose, elongate but not compressed at apical part; dorsal orifice not reaching basal bulb; apical lamella long; right paramere as long as left paramere.

Range. Asia (Japan).

Remarks. Apart from the pronotum and the basal part of the elytra characteristic in form, *Yukihikous* may be related to *Jujiroa* UÉNO, but it is distinguishable from this, in addition to the above-mentioned characteristics, by the pronotum bisetose on either lateral margin and the elytra with only one pore at about the middle on the third interval and the basal border incomplete.

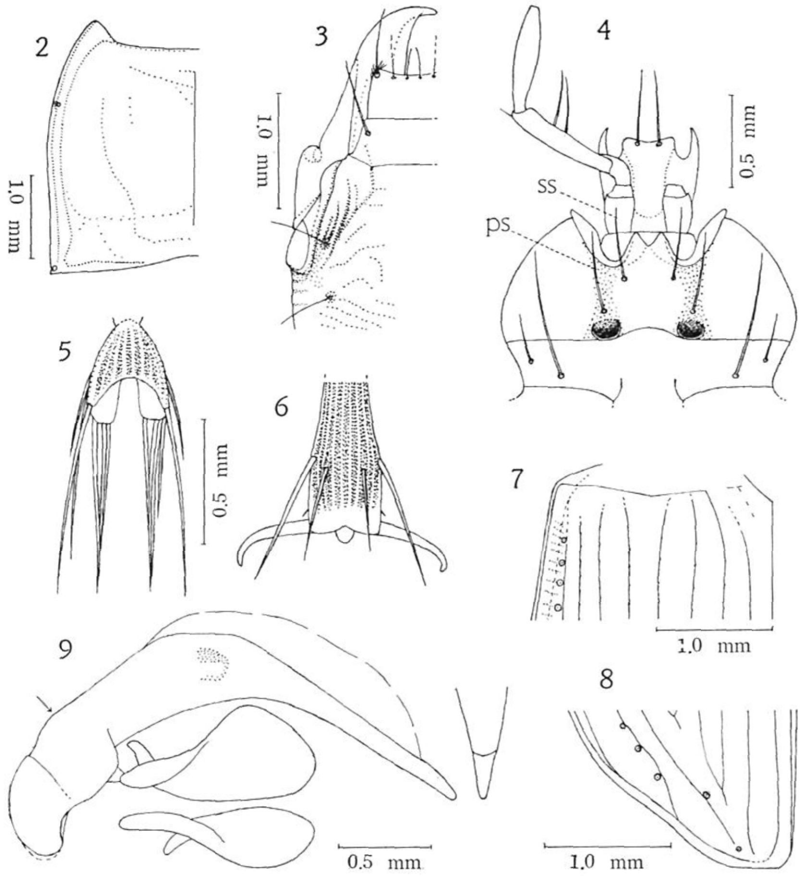
Yukihikous minobusanus sp. nov.

"Hirano-aka-hirata-gomimushi"

Description. Length 12.5 mm. Width 5.3 mm.

Reddish brown, shiny, head somewhat dark; mandibles dark reddish brown or reddish black, palpi a little pale, antennae, tibiae and tarsi slightly dark; ventral side reddish brown, faintly dark at anterior half, somewhat light at posterior half.

Head (Fig. 3) fairly convex, with minute scattered punctures, with several rather distinct rugae except at median area, with three distinct longitudinal sulci before anterior supraorbital seta on either side, interspaces of sulci carinate; microsculpture indistinct, faint isodiametric meshes visible here and there; tempora rough owing to rugae in dorsal view, very slightly tumid; eyes somewhat dilated posteriorly, so posterior part a little protrudent beyond tempora, WH/WF 1.23; interspace of posterior supraorbital setae a little narrower than interspace of anterior setae, which are fairly distant from eyes; frontal lateral furrows moderately deep; frontal impressions somewhat deep, diverging, not reaching anterior supraorbital setae, but interrupted by one sulcus and carina inside anterior supraorbital setae; antennae extending beyond basal one-fourth of elytra, segment 1 three times as long as wide, one and one-third times as long as segment 3 which is as long as segment 4; apical segment as long as penultimate segment in maxillary palpi.



Figs. 2–9. *Yukihikous minobusanus* gen. et sp. nov.
2. Pronotum. 3. Head. 4. Submentum, mentum, labial palpus and ligula with paraglossae. ps: primary seta. ss: secondary seta. 5. Segment 4 of left hind tarsus. 6. Segment 5 (apical part) of left hind tarsus. 7. Left elytron at basal area. 8. Left elytron at apical area. 9. Male genitalia (arrow of aedeagus indicating termination of dorsal orifice).

Pronotum (Fig. 2) flat, widest before middle, one and three-fifths times as wide as head, one and one-third times as wide as long (WP/WH 1.61, WP/LP 1.33, WP/WBP 1.02, WBP/WAP 1.45); surface with a few faint punctures in and around basal foveae, with rather dense, minute punctures at apical area, faintly, transversely rugose on disc; microsculpture forming fully transverse meshes, but faint on disc, somewhat distinct at basal and lateral areas, rather faint and almost isodiametric at median apical area; apex emarginate; apical angles somewhat dull at apex; base deeply emarginate at middle, somewhat oblique posterolaterally at lateral areas, sulcate at oblique areas; basal angles acute; lateral margins somewhat roundly, fairly contracted anteriorly, very slightly sinuate at three-fourths, thence parallel up to basal angles; anterior marginal setae at one-fourth (left margin) or at one-fifth (right margin), slightly breaking lateral margins, posterior setae in basal angles, somewhat distinctly breaking lateral margins; basal foveae shallow, diverging forward, terminating a little beyond level of anterior marginal setae, basal part indistinct, not reaching base; inside area of basal angles fairly depressed.

Elytra slightly convex, widest at about middle, one and one-fifth times as wide as pronotum (WE/WP 1.22), one and three-fifths times as long as wide; microsculpture rather distinct, forming somewhat transverse meshes at basal half on inner intervals, meshes becoming much more transverse at apical half and outer intervals; basal border (Fig. 7) gently sinuate opposite interval 5, thence faintly undulate and somewhat oblique outward, forming rectangular angle at shoulder opposite lateral reflexed area; lateral margin gently dilated from shoulder to middle, shallowly sinuate at basal one-sixth; lateral reflexed area relatively wide; apical sinuation distinct, with fine inner plica; outer apical angle widely rounded; sutural angle with vestige of tooth on right elytron; striae moderately impressed, faintly crenulate; intervals slightly convex; marginal series seventeen or eighteen.

Fore tarsi of ♂ with segment 1 one and two-sevenths times as long as wide, less than one and three-fourths times as long as segment 2 which is a little less than one and one-half times as wide as long; hind tarsi one and two-sevenths times as long as head width, segment 1 one and seven-tenths times as long as segment 2, segment 5/segment 1=1.24.

Ventral side with several distinct punctures on mesosternum, mesepisterna, metepisterna and lateral areas of sternite 1; metepisterna completely bordered at front side, not bordered at outer side, L/W 1.10; epipleurae wider at basal area than usual, wider than metepisterna.

Aedeagus (Fig. 9) six-sevenths as long as genital segment, slender, well arcuate at middle, very slightly curved ventrally at subapical area, apex narrowly rounded ; dorsal orifice terminating moderately distantly from basal bulb ; basal bulb rather distinctly delimited, with short transparent basal lobe ; apical lamella long and narrow, twice as long as wide, lateral margins gently contracted apically, apex narrowly rounded.

Distribution. Japan : Central Honshu.

Type-specimen. Holotype : ♂, VI. 2, 1978, Mt. Minobu, Yamanashi Pref., Y. HIRANO leg.

Studies on Asian Cerambycidae, III. (Coleoptera)

By Masao Hayashi

The present paper contains the descriptions of four new species of Lamiinae from Taiwan and two new genera which are represented by the two among these four. A new distributional record of a Philippine species from Lan Hsu Island, Taiwan is also added.

Materials used in the present study have been sent through the courtesy of Messrs. Y. Kiyoyama, K. Kojima, T. Mizunuma, K. Murakami and T. Shibata, to whom the present author is greatly indebted for their generosity and constant aids.

Lamiinae

Apomecynini

Paraneosybra gen. nov.

Body relatively small but stout; head retreated in front, frons short and transverse, antennal tubercles raised and separated each other, vertex dully concave at middle. Eyes coarsely faceted, deeply emarginate. Antennae stout, fairly shorter than body even in male, ciliate beneath with rather long hairs; scape thickened preapically, third longer than scape and fairly shorter than fourth. Prothorax slightly broader than long, distinctly constricted behind apex and finely weakly so just before base, almost parallel-sided; disc convex. Scutellum trigonate, transverse. Elytra long, fairly broader than prothorax at base, slightly dilated posteriorly and dully obliquely truncate at apices; disc convex. Prosternal process lower than their coxae, procoxal cavities closed behind; mesosternal process gradually inclined to base and longitudinally impressed at middle, mesocoxal cavities open externally to epimera; metasternum normal in length. Legs of moderate length, femora clavate, midtibia shallowly sinuate preapically on dorsum, tarsal claws divergent.

Type species: *Paraneosybra fulvofasciata* sp. nov.

Range: Taiwan.

This new genus is structurally allied to *Neosybra* Breuning, however, it differs from the latter in having stouter body, stouter and shorter antennae with long ciliate hairs, raised and not approximate antennal tubercles and clavate femora.

〔Ent. Rev. Japan, Vol. XXXII, Nos. 1/2, pp. 107–111, Dec., 1978〕

Paraneosybra fulvofasciata sp. nov.

Body brownish black, partly light yellowish red on the grounds which densely covered with fulvous yellow pubescence on basal and apical thirds, sides of breast, large part of metasternum and bases of fourth to seventh antennal joints. Body covered with fulvous yellow pubescence sparsely on body in general; antennae ciliate beneath with long black hairs.

Head finely sparsely punctured on frons and vertex, not on occiput. Antennae slightly shorter than body in male and fairly shorter than in female, stout, relative length of each joint is as follows:— 5 : 1 : 6 : 7.7 : 4.3 : 3 : 2.3 : 1.8 : 1.7 : 1.4 : 2.1 (♀). Prothorax coarsely irregularly punctured, convex on disc. Scutellum impunctate. Elytra 1.6 times as long as the basal width, nearly parallel-sided for basal one third, slightly dilated posteriorly to the base of medioposterior fulvous yellow pubescent band, then distinctly narrowed to dully narrowly truncate apices; disc convex at base and again behind middle, depressed behind basal elevated portions, coarsely sparsely punctured and roughly rugose, the punctures suddenly becoming finer behind the yellow transverse band to apex. Sides of breast subcoarsely sparsely punctured. Legs stout, femora clavate, tibiae relatively short, first hind tarsal joint a little shorter than the following two joints united together.

Length, 11 mm., width, 3.5 mm.

Holotype, ♀ (HAYASHI Coll.), Nanshanchi, Nantou Hsien, Taiwan, April 7, 1973, Y. KIYOYAMA leg.; paratype, 1 ♂, Nanshanchi, May 13, 1970, Y. KIYOYAMA leg. (SHIBATA Coll.).

Brachysybra elliptica BREUNING

BREUNING, 1940, Folia Zool. Hydrob., 10 : 428 (Mt. Makling,Luz on, Philippines); Ditto, 1960, Cat. Lam. Monde : 139; Ditto, 1964, Ent. Abh. Staatl. Mus. Tierk. Dresden, 30 : 82, pl. 5, fig. 44.

Material examined : 1 ♀, Lan Hsu Island, off the South East Coast of Taiwan, April 11, 1978, K. MURAKAMI leg. New to Taiwanese fauna. Length, 8.8 mm.

Hoppopsini

Pothyne lanhsuensis sp. nov.

Body blackish brown, reddish on elytra; decorated with yellowish pubescence in the forms of vittae and markings as the following manner:— a triangular marking on frons, a pair of narrow lines along lateral sides of frons and genae, and narrow surroundings of under eyelobes; five longitudinal vittae on prothorax, central one narrow, bilobed at the middle, leaving a narrow blackish brown line, a discal pair narrow, a lateral pair at sides, very broad, which prolonging backward onto mesepimera and metepisterna; entirely on scutellum, excepting a narrow median shining line; six pairs of narrow longitudinal vittae on elytra, first on suture, second somewhat narrow and third somewhat broad, second and third on disc, fourth and fifth lateral, and sixth on margins. Antennae covered with fulvous pubescence, narrowly denuded at apices from fourth to apical joints and the denuded portions becoming larger than that of fourth to apical joints. Body beneath densely covered with yellowish pubescence. Legs finely covered with pubescence. Abdomen decorated with a small brownish black marking at each side of first to fourth segments.

Frons trapezoidal, finely sparsely punctured, vertex narrow, triangularly concave with a narrow black shining longitudinal line, prolonging backward to the base of occiput, occiput with a pair of short black shining longitudinal ridges. Eyes finely faceted, deeply emarginate, under eyelobe longer than wide and also than gena below it (ratio, 4 : 3.5). Antennae in female 1.7 times as long as body, scape slender, relative length of each joint is as follows:— 14 : 1.3 : 14.5 : 13 : 11.5 : 9 : 9 : 8.5 : 8.5 : 7.8 : 7.5 : 7. Prothorax nearly as long as broad, narrowly margined just insides of apex and base and additionally a little constricted before base and slightly rounded laterally; disc finely sparsely and irregularly punctured with a transverse ridge at middle and a longitudinal ridge crossing with the former. Scutellum tongue-shaped, longitudinally impressed along middle. Elytra 2.8 times as long as the basal width, almost parallel-sided, only excepting a shallow constriction at some distance behind base and broadly obliquely truncate at apices; disc sparsely finely punctured.

Length, 16 mm., width, 4 mm.

Holotype, ♀ (HAYASHI Coll.), Lan Hsu Island, off the South East Coast of Taiwan, April 9, 1978, K. MURAKAMI leg.

This new species is structurally allied to *P. suturella* BREUNING from North China, however, it differs from the latter in having shorter antennae, sparsely finely punctured prothorax and elytra and broadly obliquely truncate elytral apices.

Rhodopinini

Taiwanajinga gen. nov.

Body moderately elongate, convex. Head not retreated in front, frons transverse, antennal tubercles developed, vertex triangularly concave. Eyes finely faceted, distinctly emarginate, lower lobe triangular. Antennae longer than body in both sexes, scape thickened, third joint shorter than fourth and nearly as long as scape. Prothorax broader than long, a little rounded laterally, convex on disc. Scutellum trigonate. Elytra fairly broader than prothorax at base, slightly dilated posteriorly and separately rounded at apices; disc convex, simple. Prosternal process narrow, lower than their coxae; procoxal cavities closed behind; mesosternal process gradually inclined to base, mesocoxal cavities narrowly open externally to epimera; metasternum scarcely abbreviated. Legs slender, forefemora clavate, mid- and hindfemora shortly pedunculate and posteriorly clavate; midtibia shallowly sulcate preapically on dorsum; tarsal claws divaricate.

Type species: *Taiwanajinga albofasciata* sp. nov.

Range: Taiwan.

This new genus is somewhat allied to *Falsajinga* BREUNING, however, it differs from the latter in having the relatively shorter, not cylindrical body, not trapezoidal frons, not coarsely faceted eyes with not transverse under eyelobe, not elongate prothorax and relatively broad and posteriorly dilated elytra with not truncate apices.

Taiwanajinga albofasciata sp. nov.

Body dark brown, largely covered with whitish grey pubescence densely finely on head, prothorax, scutellum, basal one third and postmedian broad transverse band on elytra and on legs, thinly on body beneath, and intermixed with scarce fulvous pubescence partly on basal half of body. Antennae basally annulated with fine white pubescence from third to apical joints.

Head very scarcely finely punctured on frons, with a dull median longitudinal furrow at vertex prolonging backward to occiput. Under eyelobe slightly longer than gena below it. Antennae 1.7 times as long as body in male and longer than body in female, scape somewhat thickened, relative length of each joint is as follows:— 5.5 : 1.3 : 6.5 : 8.6 : 6.5 : 6.3 : 6 : 5.5 : 5 : 4.3 : 4.5 (♀). Prothorax coarsely sparsely punctured. Scutellum broad, shallowly longitudinally impressed along middle. Elytra twice as long as the basal width, almost parallel-sided for basal one third and slightly dilated posteriorly to the apex of middle one third, then narrowed to separately rounded apices; disc convex, a little depressed before middle on disc, subcoarsely sparsely punctured, the punctures becoming finer to apex. Sides of breast subcoarsely sparsely punctured. Tibiae curved, first hind tarsal joint fairly shorter than the following two joints united together.

Length, 11 mm., width, 4 mm.

Holotype, ♀ (HAYASHI Coll.), Baleng she, Taiwan, June 25, 1972, K. KOJIMA leg.; paratypes, 1 ♂, Nanshanchi, Nantou Hsien, Taiwan, April 25, 1972, T. MIZUNUMA leg.; 1 ♀, Nanshanchi, April 10, 1973, Y. KIYOYAMA leg.; 1 ♀, Lienhwachi, April 16, 1973, Y. KIYOYAMA leg. (HAYASHI & SHIBATA Coll.).

Mimectatina murakamii sp. nov.

Body chocolate brown, covered thinly with greyish white pubescence in general on head, scutellum and legs and rather densely on sides of breast and abdomen, and bases from fourth to tenth antennal joints; decorated with white pubescence as the following manner:— a pair of broad lateral longitudinal vittae on prothorax, leaving thin grey pubescent broad central longitudinal portion with an indistinct narrow median longitudinal whitish line, the basal one third of elytra and a pair of broad lateral vittae, and with pure white pubescence on a pair of short oblique vittae before middle of elytral disc and a broad subapical transverse band which surrounding a narrow chocolate brown oblique marking near suture, and elytral apices broadly margined with black.

Head sparsely punctured, frons transverse, vertex dully concave, with a median longitudinal furrow from apex of frons through vertex to occiput. Antennal tubercles dully raised. Eyes coarsely faceted, deeply emarginate, lower lobe as long as wide and also gena below it. Antennae in male longer than body surpassing elytral apex by ninth joint, scape weakly thickened, relative length of each joint is as follows:— 5: 1: 6: 7.6: 5.5: 5.3: 5.1: 4.4: 4: 3.7: 3.5. Prothorax as long as broad, weakly rounded laterally, narrowly margined at apex and base, and weakly constricted before base; sparsely finely punctured on disc. Scutellum transverse, quadrate. Elytra 2.75 times as long as the basal width, slightly broadened just behind base, gradually narrowed posteriorly to strongly emarginate apices with triangularly produced marginal angles, disc convex, dully elevated at base, obliquely depressed behind the basal elevations, irregularly sparsely punctured. Body beneath sparsely punctured. Femora clavate, tibiae relatively short. Antennae sparsely ciliate beneath.

Length, 9.5 mm., width, 3 mm.

Holotype, ♂ (HAYASHI Coll.), Lan Hsu Island, off the South East Coast of Taiwan, April 10, 1978, K. MURAKAMI leg.; paratype, 1 ♀, the same data as holotype. The female paratype is measured as length, 12 mm., width, 4 mm.

It differs from the structurally allied to *M. apicefusca* BREUNING of Northern Vietnam in having different colorations of body and pubescence, especially white and blackish elytral patterns; it also differs from *M. meridiana* (MATSUSHITA) of Taiwan, *M. ohirai* BREUNING et VILLIERS of Southern Ryukyu and *M. singularis* AURIVILLIUS of Philippines in having strongly emarginate elytral apices with triangularly produced marginal angles, not of truncate ones.

On Three *Brachymeria* Species of Japan (Hymenoptera, Chalcididae)

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I describe two species of *Brachymeria*, one is new to science, the other is unknown to our fauna, and give an account of convexity of the compound eyes in *Brachymeria secundaria* (Ruschka) in this paper. Because four species were added to our fauna and three specific names were changed during the last fifteen years since I made a revised key to the *Brachymeria* species of Japan in 1963, Mushi, 37, pp. 119–122, I give the second revised key at the final place.

Thanks are due to Dr. K. Kamijô, Messrs. K. Mizusawa and T. Nambu for kindly placing the specimens in my hands for study.

Brachymeria (*Brachymeria*) *lugubris* (Walker)

"Mizusawa-kuro-ashibuto-kobachi"

Chalcis lugubris Walker, 1871, Notes on Chalcidiae, part 3, Torymidae and Chalcididae: 49–50 (Hong Kong).

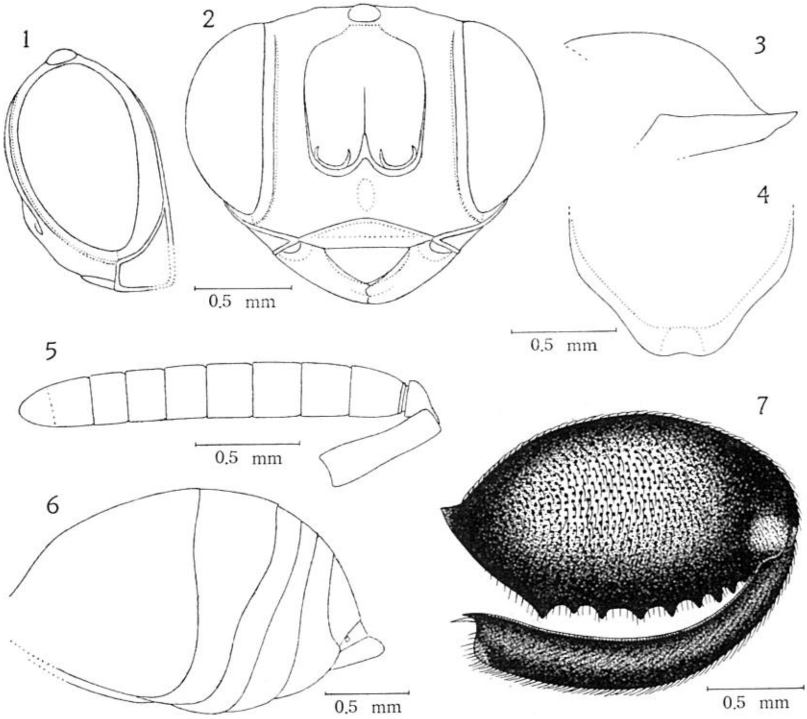
Brachymeria lugubris Walker: Joseph, Narendran and Joy, 1973, Oriental *Brachymeria*, a monograph on the Oriental species of *Brachymeria* (Hymenoptera: Chalcididae). Zool. Monogr., no. 1: 14, 60–62, fig. 16 (1–7).

Among several Chalcidid specimens Mr. K. Mizusawa collected in the Ryukyus, there is a female one which, together with a female from Java (VI. 1928, T. Ishii leg.) preserved in our laboratory, almost agrees with the redescription made by Joseph *et al.* (1973) except a few characteristics. I redescribe the species here mainly from the Ryukyus specimen.

Description. Female: Length 5.4 mm (4.6 mm in Java ex.).

Head black, mat. Antennae black. Thorax black, rather mat; tegulae reddish black, pale yellow at marginal areas. Wings somewhat smoky, faintly iridescent (fairly iridescent in Java ex.); veins brownish black, submarginal vein of hind wings rather pale. Coxae black; trochanters brownish black; fore and mid femora black, narrowly pale yellow at apical area, hind femora (Fig. 7) black, with small, dirty yellow patch at apex on outer side and inner side; fore and mid tibiae black, reddish yellow at apical area, pale yellow at basal area, narrowly extending apically on dorsal side in fore tibiae, hind tibiae (Fig. 7) black, narrowly reddish brown only at dorsoapical angle; fore and mid tarsi reddish yellow, hind tarsi dark reddish brown. Abdomen black. Pubescence on body silvery.

Head (Figs. 1, 2) as wide as thorax (a little wider than thorax in Java ex.); surface shallowly pitted on vertex and frons, with narrow, smooth, somewhat convex area below scrobe cavity at middle; ocellar area two-thirds as wide as inter-ocular space at level of hind ocelli, inter-ocellar space two and three-eighths times (two and one-third times in Java ex.) as wide as major axis of hind ocelli; compound eyes glabrous, rather convex, combined width of each eye a little more than three-fourths as wide as inter-ocular space at level of ventral margin of scrobe



Figs. 1–7. *Brachymeria* (*Brachymeria*) *lugubris* (WALKER), ♀.
1. Head in lateral view. 2. Head in ventrofront view. 3. Mesoscutellum in lateral view. 4. Mesoscutellum in dorsal view. 5. Left antenna. 6. Gaster (ex. from Java). 7. Left hind femur and tibia.

cavity, inner margin almost straight; preorbital carinae distinct, becoming less distinct ventrally in Ryukyus ex.; scrobe cavity four-sevenths as wide as inter-ocular space, almost reaching or somewhat spaced from front ocellus; inter-antennal projection a little thick; malar space one-third as high as compound eye; geno-temporal regions moderately wide, postorbital carina distinct, complete; front genal angle less than 90°, hind genal angle not well observable in Ryukyus ex. (almost rectangular though rounded in Java ex.).

Antennae (Fig. 5) with scape not reaching front ocellus, one and one-fifth times as long as segments 4 and 5 together, segment 4 as long as segment 5, segment 5 a little wider than long, segments 5 to 10 gradually decreasing in length, segments 6 to 10 slightly decreasing in width, segment 10 one and one-half times as wide as long; club a little more than twice as long as segment 10.

Thorax densely pitted on dorsal side, interspace of pits fully narrow, somewhat carinate, with distinct microsculpture except mesoscutellum (microsculpture hardly visible in Java ex.); mesoscutellum (Figs. 3, 4) faintly, longitudinally carinate at middle (in Java ex.) or hardly carinate (in Ryukyus ex.), relatively long, one and one-ninth times as long (including apical lobes) as wide, moderately high in lateral view, gently declined posteriorly, lateral margins fairly sinuate at subapical area, apical area well explanate, hardly reflexed, apex shallowly emarginate, lobes rounded; propodeum without distinct tooth on either side.

Fore wings two and one-fifth times as long as wide (in Java ex.); marginal vein one-half as long as submarginal vein, post-marginal vein one-third as long as marginal vein, twice as long as stigmal vein.

Hind coxae without protuberance on ventral side; hind femora (Fig. 7) one and six-sevenths times as long as wide, outer side distinctly, densely pubescent-punctate, microsculpture faint (absent in Java ex.), inner side distinctly, but less densely pubescent-punctate, without protuberance near base, outer ventral margin with eight distinct teeth.

Abdomen (Fig. 6) almost as long as or a little longer than pronotum, mesoscutum and mesoscutellum combined, moderately declined posteriorly in lateral view, tergite 1 not punctate, with distinct microsculpture, tergite 2 with fully distinct microsculpture, with setiferous punctures except on posterior half of median dorsal area; tergite 6 densely pitted; epipygium carinate at middle; ovipositor sheath projecting beyond epipygium, well visible in dorsal view, shagreened, punctures indistinct.

Male: Unknown.

Distribution. Japan: Ryukyus—Ishigaki Is. (K. MIZUSAWA leg.). Formosa. Philippines. Java. Hong Kong. Indo-China. Malaya. India.

Host. *Atteva fabriciella* SWED. (Yponomeutidae, Lep.) (after JOSEPH *et al.*, 1973).

Remarks. This species, although fairly differs in the colour of the legs, seems to be most allied to *B.* (*B*) *fiskei* (CRAWFORD) in the species of Japan. The hind legs black for the most part remind of *B.* (*B.*) *fenesta* HABU, but the mesoscutellum well explanate and bilobed at the apex renders it easy to distinguish it from *B. funesta.*

Brachymeria (*Brachymeria*) *nambui* sp. nov.

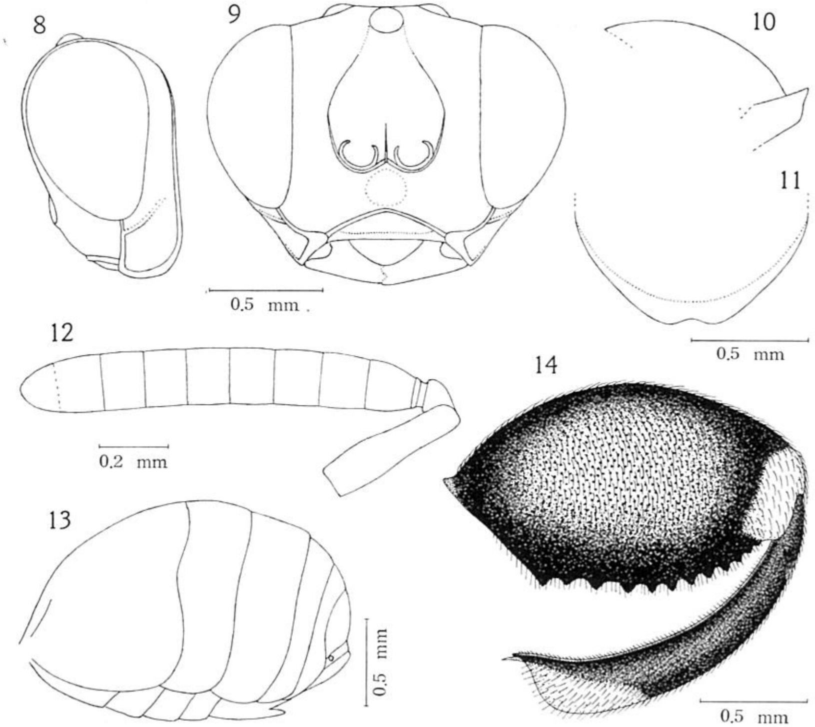
"Nambu-ashibuto-kobachi"

Description. Female: Length 4.2–4.6 mm.

Head black, rather mat. Antennae black. Thorax black, rather mat; tegulae pale yellow, narrowly black at base. Wings somewhat smoky, iridescent; veins dark brown, submarginal vein of hind wings pale. Coxae and trochanters black; fore and mid femora black, pale yellow at apical part, hind femora (Fig. 14) black, with rather small, pale yellow patch at apex, patch extending from outer side to inner side; fore and mid tibiae pale yellow, with large black band at middle, black band more or less obscure or evanescent at dorsal and inner sides, hind tibiae (Fig. 14) black, with small brownish yellow patch at pre-basal area, with large yellow (faintly reddish in part) patch at apical area, apical patch not reaching ventral carina on outer and inner sides; tarsi pale yellow, often faintly brownish. Abdomen black. Pubescence on body silvery-grey.

Head (Figs. 8, 9) a little narrower than thorax; surface shallowly pitted on dorsal side and dorsal half of frons, irregularly carinate at ventral half of frons and geno-temporal regions, not smooth nor glabrous below scrobe cavity though somewhat convex at middle, pubescence not fully dense; ocellar area two-thirds to seven-tenths as wide as inter-ocular space at level of hind ocelli, inter-ocellar space one and six-sevenths to one and seven-eighths times as wide as major axis of hind ocelli; compound eyes glabrous, moderately large and convex, combined width of each eye eight-ninths to nine-tenths as wide as inter-ocular space at level of ventral margin of scrobe cavity, inner margin almost straight; preorbital carinae absent; scrobe cavity three-fifths as wide as inter-ocular space, reaching front ocellus; inter-antennal projection thin; malar space three-eighths as high as compound eye; geno-temporal regions moderately wide, postorbital carina incomplete, somewhat distinct below compound eyes, becoming indistinct behind; front genal angle hardly protrudent, hind genal angle not angulate but widely rounded.

Antennae (Fig. 12) with scape not reaching front ocellus, as long as segments 4 to 6 combined, segments 4 to 6 almost equal in length, slightly increasing in width, segments 8 to 10 a little shorter than



Figs. 8–14. *Brachymeria* (*Brachymeria*) *nambui* sp. nov., ♀.
8. Head in lateral view. 9. Head in ventrofront view. 10. Mesoscutellum in lateral view. 11. Mesoscutellum in dorsal view. 12. Left antenna. 13 Gaster. 14. Left hind femur and tibia.

segment 7 or 6, equal in length and width, segment 10 one and one-third times as wide as long; club twice as long as segment 10.

Thorax distinctly pitted on dorsal side, interspace of pits fully narrow, rather carinate, with distinct microsculpture; mesoscutellum (Figs. 10, 11) moderately high in profile, fairly declined posteriorly, apical area explanate and reflexed, setae not fully dense near apex, apex emarginate and bilobed, lobes rounded; propodeum without distinct tooth on either side.

Fore wings two and one-eighth to -sixth times as long as wide; marginal vein one-half or a little less than one-half as long as submarginal vein, post-marginal vein a little more than one-third as long as marginal vein, twice or a little less than twice as long as stigmal vein.

Hind coxae densely punctate and pubescent on ventral side, with one small dull protuberance on inner ventral area at apical third; hind femora (Fig. 14) one and five-sixths to one and six-sevenths times as long as wide, outer side densely, distinctly pubescent-punctate, without reticulation, inner side distinctly, but less densely pubescent-punctate, without protuberance near base, outer ventral margin with nine to twelve teeth.

Abdomen (Fig. 13) one and one-ninth to -sixth times as long as pronotum, mesoscutum and mesoscutellum together, rather globose in lateral view, widest at middle, roundly, fully declined posteriorly and posterior part perpendicular in profile; tergite 1 smooth and shiny, with faint reticulation on dorsal side, tergite 2 with distinct microsculpture, with setiferous punctures except at posterior half of median dorsal area; tergite 6 densely pitted; epipygium shorter than usual, not visible in dorsal view, faintly carinate at middle; ovipositor sheath rather short, slightly protrudent beyond epipygium, a little discernible in dorsal view, shagreened and not punctate.

Male and host: Unknown.

Distribution. Japan: Honshu.

Type-series. Holotype: ♀, X. 16, 1977, Yorii, Saitama Pref., T. NAMBU leg., preserved in Nat. Inst. Agr. Sci. Paratypes: 6 ♀♀, same as holotype.

Remarks. The new species appears to be closely allied to *B.* (*B.*) *dunensis* JOSEPH, NARENDRAN and JOY from India, but differs in the deep black body ("liver brownish-black" in the coxae, trochanters, femora, hind tibiae and the abdomen in *B. dunensis*), the hind tibiae with the apical yellowish patch larger and a small prebasal patch, and the geno-temporal regions with a postorbital carina though not fully distinct nor complete.

The common *B.* (*B.*) *lasus* (WALKER) has also a small protuberance on the inner ventral area of the hind coxae in the female, but the pattern of the hind tibiae is fully different between these two species.

Brachymeria (*Brachymeria*) *secundaria* (RUSCHKA)

This species is characteristic in having fairly large and convex compound eyes, the combined width of each eye being more or less wider than the frons below the scrobe cavity. I examined six very small male specimens (from 1.90 mm to 2.50 mm in length) reared from *Apanteles liparidis* BOUCHÉ, *A. ordinarius* RATZEBURG (Braconidae) and an *Ichneumon* species in Hokkaido thanks to Dr. K. KAMIJÔ, and I noticed that the largest one of the six specimens, 2.50 mm in length, had normally convex and large eyes, but in other specimens the smaller the body became, the less convex the compound eyes were; the length of the body and convexity of the compound eyes in the six specimens are indicated in the following table.

Length (mm)	2.50	2.40	2.05	1.95	1.95	1.90
Combined width of each eye/ width of inter-ocular space	1.05	0.93	0.91	0.86	0.85	0.82

Key to twenty-one *Brachymeria* species of Japan

1. Abdomen with ovipositor sheath at ventroapical part (♀) (19 spp.) ········· 2
— Abdomen without ovipositor sheath, apical sternite not divided longitudinally (♂) (15 spp.) ········· 21
2. Hind coxae with trichoid zone on inner ventral area; clypeus not or indistinctly risen, shagreened and densely pubescent on post-clypeus; gaster almost globose, ovipositor sheath very short ······ 3
— Hind coxae without trichoid zone on inner ventral area; clypeus distinctly risen, sparsely pubescent-punctate on post-clypeus ············ 4
3. Hind tibiae yellow, dark at basal area, with black longitudinal band along ventral carina; frons shagreened and densely pubescent below inter-antennal projection like post-clypeus, median part of fronto-clypeal suture effaced ········· B. (*Matsumurameria*) *taiwana* (MATSUMURA, 1910)
Distribution in Japan: Ryukyus.
— Hind tibiae blackish reddish-brown, with whitish pre-basal and apical patches; frons irregularly carinate and less densely pubescent below inter-antennal projection than post-clypeus, fronto-clypeal suture almost complete ············ B. (*Matsumurameria*) *ryukyuensis* HABU, 1963
Distribution in Japan: Ryukyus.
4. Hind coxae with one small dull protuberance on inner ventral area ········· 5
— Hind coxae without protuberance on inner ventral area ·············· 6
5. Hind tibiae yellow, black at basal area, basal black part extending apically as black longitudinal band on ventrolateral area; head with postorbital carina complete; abdomen oval, ovipositor sheath distinctly protrudent beyond epipygium ········· B. (*Brachymeria*) *lasus* (WALKER, 1841)
(=*obscurata* (WALKER, 1874))
Distribution in Japan: Hokkaido; Honshu; Ogasawaras; Shikoku; Kyushu; Satsunans; Ryukyus.
— Hind tibiae black, with small brownish yellow pre-basal patch, with large yellowish apical patch, apical patch not reaching ventral carina; head with postorbital carina incomplete; abdomen globose at apical part, ovipositor sheath rather short, slightly protrudent beyond epi-

pygium ······································*B.* (*Brachymeria*) *nambui* sp. nov.
Distribution in Japan : Honshu.

6. Hind femora widely yellow at basal and apical areas, sometimes almost wholly yellow, hind tibiae wholly yellow ; mesoscutellum distinctly bilobed at apex, with dense silvery long bristles at lateral areas and near apex ······*B.* (*Brachymeria*) *ornatipes* (CAMERON, 1906)
Distribution in Japan : Ryukyus.

— Hind femora yellowish only at apical area, hind tibiae black, sometimes brown, with or without basal or pre-basal patch and apical patch, or yellow with black longitudinal band····························· 7

7. Hind tibiae whitish yellow, dark reddish brown at basal area, with black longitudinal band on ventrolateral area, hind femora generally wholly reddish brown, sometimes partially black, with small whitish yellow apical patch ; head without preorbital carinae on frons········ ······························ *B.* (*Brachymeria*) *bengalensis* (CAMERON, 1897)[1]
(=*B. yasumatsui* HABU, 1963)
Distribution in Japan : Ryukyus.

— Hind tibiae black, with or without basal or pre-basal patch and apical patch·· 8

8. Hind femora orange or reddish brown, with whitish or yellowish patch at apex··· 9

— Hind femora black, with yellow or whitish patch at apex ···········10

9. Head without distinct preorbital carinae on frons ; hind femora densely pubescent-punctate and rugose ; hind femora with large whitish yellow apical patch, hind tibiae brown, light yellow pre-basal patch large··························*B.* (*Brachymeria*) *coloradensis* (CRESSON, 1872)
Distribution in Japan : Hokkaido[2]; Honshu ; Satsunans.

— Head with distinct preorbital carinae on frons ; hind femora sparsely pubescent-punctate, not rugose ; hind femora with small whitish apical patch, hind tibiae black, whitish pre-basal patch rather small (cf. paragraph 18)·········*B.* (*Brachymeria*) *podagrica* (FABRICIUS, 1787)
(=*fonscolombei* (DUFOUR, 1841))
Distribution in Japan : Honshu ; Ogasawaras ; Shikoku ; Kyushu ; Satsunans ; Ryukyus.

10. Head without postorbital carina···11

— Head with postorbital carina ···12

11. Right mandible with three teeth at apex ; fronto-genal sutures completely carinate ; genae flat below compound eyes ; basal area of

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[1] Judging from the figure given by the authors, the abdomen gently declined posteriorly suggests that *B. bengalensis pulchellae* JOSEPH *et al.* is a distinct species.

[2] 1 ♀, VIII. 6, 1963, Hôheikyô, Jyôzankei, near Sapporo, T. NAMBU leg.

hind tibiae black ···············*B.* (*Brachymeria*) *excarinata* GAHAN, 1925

Distribution in Japan: Honshu; Shikoku; Kyushu; Satsunans; Ryukyus.

— Right mandible with two teeth at apex; fronto-genal sutures carinate only at ventral half; genae somewhat swollen below compound eyes; basal area of hind tibiae generally reddish or brownish···*B.* (*Brachymeria*) *inermis* (FONSCOLOMBE, 1840)

Distribution in Japan: Honshu.

12. Head with distinct preorbital carinae on frons ··························13

— Head without preorbital carinae on frons ····································20

13. Abdomen fairly long, prolonged posteriorly, one and one-half times as long as pronotum, mesoscutum and mososcutellum together; hind tibiae yellow at basal one-third and apical one-third portions, black at median one-third portion ···*B.* (*Neobrachymeria*) *nosatoi* HABU, 1966

Distribution in Japan: Ryukyus.

— Abdomen short to rather long, less than one and one-half times as long as pronotum, mesoscutum and mesoscutellum together·········14

14. Mesoscutellum emarginate and more or less bilobed at apex ······15

— Mesoscutellum rounded and not bilobed at apex ·······················19

15. Abdomen globose, depressed from behind at apex, tergite 6, epipygium and ovipositor sheath not visible in dorsal view ···*B.* (*Brachymeria*) *kamijoi* HABU, 1960

Distribution in Japan: Shikoku; Kyushu.

— Abdomen more or less declined posteriorly, tergite 6, epipygium and ovipositor sheath observable in dorsal view ·································16

16. Hind tibiae wholly black, only narrowly reddish brown at dorsoapical angle, hind femora with small apical patch; mesoscutellum well explanate at apical area, longer than usual, one and one-ninth times as long as wide ···············*B.* (*Brachymeria*) *lugubris* (WALKER, 1871)

Distribution in Japan: Ryukyus.

— Hind tibiae with large apical and pre-basal patches; mesoscutellum as long as or a little longer than wide ·······································17

17. Tergite 2 with minute dense punctures at median apical area on dorsal side; hind femora densely pubescent-punctate; mesoscutellum generally longitudinally carinate at middle; largest species in Japan, length 7.0–8.0 mm···············*B.* (*Brachymeria*) *fiskei* (CRAWFORD, 1910)

Distribution in Japan: Hokkaido; Honshu; Kyushu.

— Tergite 2 without punctures though with microsculpture at median apical area on dorsal side; hind femora sparsely pubescent-punctate; mesoscutellum not carinate at middle; length less than 7.0 mm···18

18. Hind femora one and three-fourths to one and four-fifths times as

long as wide excluding ventral teeth, dorsal side rounded from base to apex ··························· *B.* (*Brachymeria*) *minuta* (LINNÉ, 1767)

Distribution in Japan: Hokkaido; Honshu; Shikoku; Kyushu; Satsunans; Ryukyus.

— Hind femora a little narrower, one and four-fifths to a little less than twice as long as wide excluding ventral teeth, dorsal side rather straightly contracted from greatest width to base and apex (cf. paragraph 9)··············· *B.* (*Brachymeria*) *podagrica* (FABRICIUS, 1787)

Distribution in Japan: See paragraph 9.

19. Hind tibiae yellow at basal to pre-basal area and apical area······················· *B.* (*Brachymeria*) *hime hime* HABU, 1960

Distribution in Japan: Kyushu; Ryukyus.

— Hind tibiae black, only brownish at apical area······························· *B.* (*Brachymeria*) *funesta* HABU, 1960

Distribution in Japan: Honshu; Kyushu[3].

20. Mesoscutellum emarginate and distinctly bilobed at apex; hind tibiae reddish black at base, with yellow pre-basal patch; combined width of each compound eye narrower than inter-ocular space······················· *B.* (*Brachymeria*) *hattoriae hattoriae* HABU, 1961

Distribution in Japan: Hokkaido[4]; Honshu.

— Mesoscutellum rounded and not bilobed at apex; hind tibiae yellow at basal to pre-basal area; compound eyes fully large and convex, combined width of each eye as wide as to a little wider than inter-ocular space except in extremely small individuals······················· *B.* (*Brachymeria*) *secundaria* (RUSCHKA, 1922)

Distribution in Japan: Hokkaido; Honshu.

21. Funicle of antennae with trichoid sensillae on ventral side; head with postorbital carina ······························ 22

— Funicle of antennae without trichoid sensillae on ventral side; head with or without postorbital carina······························ 30

22. Head with preorbital carina on frons······························ 23

— Head without preorbital carinae on frons······························ 29

23. Hind tibiae black, only reddish brown at apical area; mesoscutellum rounded and not bilobed at apex······························· *B.* (*Brachymeria*) *funesta* HABU, 1960

— Hind tibiae black, with large yellow patch at pre-basal area and apical area or yellow from pre-basal area to apex on dorsolateral area or wholly yellow; mesoscutellum emarginate and more or less bilobed at apex······························ 24

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[3] 1 ♀, III. 31, 1961, Ukiha, Fukuoka Pref., N. GYÔTOKU leg.

[4] 1 ♀, VIII. 5, 1968, Momijiyama, Ishikari, T. NAMBU leg.

24. Hind femora widely yellow at basal and apical areas, sometimes almost wholly yellow, hind tibiae wholly yellow··*B.* (*Brachymeria*) *ornatipes* (CAMERON, 1906)
— Hind femora black, with yellow or whitish apical patch, hind tibiae black and yellow··25
25. Hind tibiae yellow, black at basal area, basal black part extending apically as black longitudinal band on ventrolateral area··*B.* (*Brachymeria*) *lasus* (WALKER, 1841)
— Hind tibiae black, with large pre-basal and apical patches············26
26. Tergite 2 with minute dense punctures at median apical area on dorsal side; hind femora densely pubescent-punctate; mesoscutellum generally longitudinally carinate at middle··*B.* (*Brachymeria*) *fiskei* (CRAWFORD, 1910)
— Tergite 2 without punctures though with microsculpture at median apical area on dorsal side; hind femora sparsely pubescent-punctate; mesoscutellum not carinate at middle·······································27
27. Antennae not stout, scape with one yellow patch···*B.* (*Brachymeria*) *fuchuensis* HABU, 1962
   Distribution in Japan: Honshu.
— Antennae stout at funicle, scape without yellowish patch············28
28. Hind femora black, with yellow apical patch, one and three-fourths to one and four-fifths times as long as wide excluding ventral teeth, dorsal side rounded from base to apex ···*B.* (*Brachymeria*) *minuta* (LINNÉ, 1767)
— Hind femora wholly orange-coloured, or partially black, sometimes wholly black, with whitish apical patch, one and four-fifths to a little less than twice as long as wide excluding ventral teeth, dorsal side rather straightly contracted from middle to base and apex·································*B.* (*Brachymeria*) *podagrica* (FABRICIUS, 1787)
29. Mesoscutellum emarginate and bilobed at apex; length 4.5 mm······························*B.* (*Brachymeria*) *coloradensis* (CRESSON, 1872)
— Mesoscutellum pointed-rounded and not bilobed at apex; small species, length 2.5 mm··*B.* (*Brachymeria*) *minamikawai* HABU, 1966
   Distribution in Japan: Honshu.
30. Head with postorbital carina··31
— Head without postorbital carina; hind tibiae sometimes without pre-basal patch ···34
31. Head with distinct preorbital carinae on frons·····························32
— Head without preorbital carinae on frons ··································33
32. Hind tibiae mostly black, with small yellow patch at pre-basal area, with rather long yellow patch at apical area, hind femora with small

yellow apical patch················*B.* (*Brachymeria*) *kamijoi* HABU, 1960

— Hind tibiae yellow at basal one-third and apical one-third portions, black at median one-third portion, hind femora with large yellow apical patch······················*B.* (*Neobrachymeria*) *nosatoi* HABU, 1966

33. Hind femora reddish brown, sometimes partially black, with small whitish apical patch, hind tibiae whitish yellow, dark reddish brown at basal area, with black longitudinal band on ventrolateral area; mesoscutellum well emarginate and bilobed at apex······················ ·······························*B.* (*Brachymeria*) *bengalensis* (CAMERON, 1897)

— Hind femora black, with rather small yellow apical patch, hind tibiae black or reddish black, yellow at basal to pre-basal area and apical area; mesoscutellum rounded and not bilobed at apex················ ·······························*B.* (*Brachymeria*) *secundaria* (RUSCHKA, 1922)

34. Right mandible with three teeth at apex; fronto-genal sutures completely carinate; genae flat below compound eyes; basal area of hind tibiae black·············*B.* (*Brachymeria*) *excarinata* GAHAN, 1925

— Right mandible with two teeth at apex; fronto-genal sutures carinate only at ventral half; genae somewhat swollen below compound eyes; basal area of hind tibiae generally reddish or brownish········ ·······························*B.* (*Brachymeria*) *inermis* (FONSCOLOMBE, 1840)

大雪山高地帯に生息するゴミムシ類
（第1報）

井上　寿・保田 信紀

Notes on the Carabid Beetles from the Alpine Zone of the Daisetsu, Hokkaido（I）

By HISASHI INOUYE and NOBUKI YASUDA

まえがき

大雪山国立公園地帯のうち，とくに標高1,500 m以上の高地におけるゴミムシ類の採集記録は，最初河野（1936）12）によって，それまでの報文をまとめて5種が報告された．中根（1971）14）は1954年および1971年の両年に黒岳・白雲岳・姿見の池付近から裾合平付近の採集で得られた種と既知種とをあわせて24種を報告している．同年西原ら（1971）18）は1970年の採集で4種を記載した．次いで諏訪（1976）20）は1975年7〜8月に北海道が主催した大雪山系の昆虫類の総合調査で18種を確認した．筆者の一人保田（1976）27）は1974年と1975年の両年にわたって採集したゴミムシ類のうち20種を高地帯から得ている．次いで保田（1977）29）は中間報告ではあるが，従来の記録と未同定の種を含めて34種を報告した．

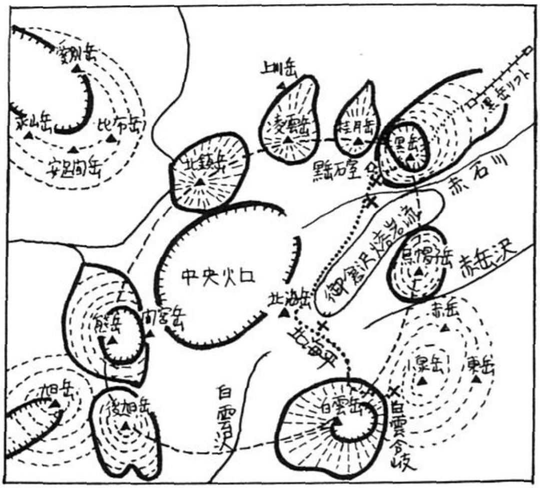
筆者らは環境庁（井上：環自保許第318号；保田：第379号）ならびに文化庁（井上：委保第4の475号；保田：第4の287号）の許可を得て，1977年8月5〜7日の3日間，大雪山国立公園特別保護地区，同特別天然記念物指定地域のゴミムシ類を採集することができたので，ここに第1報として報告する．

この調査にあたって，種々の便宜をはかっていただいた大雪営林署高山植物監視員の柴田清美氏に，また採集した一部の同定を賜った農林省農業技術研究所の土生昶申博士に厚くお礼を申しあげる．

採集コースの状況

今回，採集したコースは，黒岳石室から白雲分岐までの登山道路の周辺である（第1図）．石室横の分岐を，右に旧火口に向って雲ノ平を進むと北鎮岳方面へ，左は北海岳方面へと向うが，コースは左をたどる．お花畑の中の下り道をさがってゆくと赤石川に到着する．この辺まではロープが道路の両側に張ってあるので，まちがいなくたどってゆける．飛石づたいにこの川を渡って対岸の小尾根を越え，北海沢に入る．沢ぞいから左の斜面に入り，溶岩流

〔昆虫学評論，第32巻，第1/2号，125-131頁，1978年，12月〕



第1図．大雪山略図．
（…… 採集コース，× 採集地点）

の側面を登ると北海岳につく．ここから左の下りのコースをたどると，やがて丘陵状をした北海平である．左に烏帽子岳・赤岳・小泉岳，正面に白雲岳と連がり，右に白雲沢にそそぐ幾本もの小沢，さらに忠別川の渓をへだてて化雲岳のゆるやかな北尾根と対立する．砂礫質の道をたどり，白雲岳の裾から左に巻き込み，花の沢の上部の雪渓を渡って登りきると白雲岳と小泉岳の鞍部の白雲分岐にでる．採集地は標高 1,800～2,100 m の範囲である．

採集目録

Nebriini マルクビゴミムシ族

1. *Nebria rufescens* (STRÖM) キタマルクビゴミムシ

大雪山からは中根[14]，保田[27,29]および諏訪[20]の報告がある．

本種はわが国では北海道にのみ分布し，離島の利尻島にも産する．海外では全北区の北部に広く分布する．

大雪山では高山帯で発見されるが，今回は黒岳石室付近，赤石川原および北海平の石下で採集した．個体数は比較的多かった．水辺や雪渓に近い湿地帯に多く生息する．

2. *Nebria ochotica* R. F. SAHLBERG クロマルクビゴミムシ

大雪山からは河野[12]が *N. saeviens* BATES として誤って記録している．その後中根[14]，保田[27,29]および諏訪[20]の報告がある．北海道からは戸沢[22](1934) が *N. chinensis* BATES として最初に記録し，井上[4]は糠平で得たものを *N. japonica* BATES として報告したが，いずれも本種である．

わが国では北海道と本州の北部ならびにそれ以南では高山地帯にのみ分布している．北海道では低山帯（標高300～500 m）の河川や渓流の石下などに極めて普通で，北部地域[5,7,8]では平坦地（標高300 m 以下）でも普通である．主として渓流などの水際に生息するが，北海道では本属中で最も普通種である．

大雪山での生息密度は，高地帯よりも中腹に高い．北海平と赤石川の河原の石下で得られ

たが，個体数は少なかった．

3. *Nebria daisetsuzana* S. Uéno ダイセツマルクビゴミムシ

上野[23)]によって大雪山から最初に報告された．その後中根[14)]，西原ら[18)]，保田[27,29)]および諏訪[20)]の記録がある．

わが国では北海道にのみ分布し，大雪山の高地帯に生息する特産種である．キタマルクビゴミムシと混棲し，水辺や雪渓などに近い湿地の石下に生活しているが，本属中で最も高地性の強い種類である．

黒岳石室付近と白雲分岐の石下で得られたが，個体数は少なかった．

4. *Nebria shibanaii* S. Uéno ルリマルクビゴミムシ

上野[24)]によって大雪山から最初に報告された．その後中根[14)]，保田[27,29)]および諏訪[20)]の報告がある．

本種は大雪山の特産種である．1977年の石狩川源流総合調査（保田：未発表）では，ほぼ標高1,000 m から上流部の川原の石下に広く生息していた．高地帯では雪渓の消えたばかりの湿地に集まってくる．比較的生息範囲は広く分布している．別亜種としては subsp. *shiretokoana* Nakane は知床半島に，また subsp. *sakagutii* Nakane は日高に産する．

今回の調査では，赤石川の石下に多産した．

Notiophilini ミヤマメダカゴミムシ族

5. *Notiophilus aquaticus* (Linné) ヒメミヤマメダカゴミムシ

中根[14)]，保田[27,29)]および諏訪[20)]の報告がある．

本種はわが国では北海道と本州中部以北の高山帯で発見される．北海道では高山帯でも1,500 m 以上の高地で得られる．主として石下で生活し，乾燥している礫地帯や，雪渓に近い湿地でも観察されるし，森林地帯では落葉下に多いことも知られている．

白雲分岐付近と，北海平の石下で採集できたが，個体数は多くはなかった．

Scaritini ヒョウタンゴミムシ族

6. *Clivina fossor sachalinica* Nakane カラフトヒメヒョウタンゴミムシ

中根[14)]が最初に報告した．最近では保田[29)]が記録している．

わが国からは北海道と本州（山形県鳥海山）から知られているが，北海道では高山帯のみならず，平地にも普通に生息していて，このことについては井上[10)]が報告している．平坦地ではやや湿った腐植の多い土壌や川原の泥土上などで生活している．また，耕地でも発見される．大雪山の高地帯では7月上旬から8月上旬が羽化期と思われる．

赤石川の河原の湿った石下で得られたが，個体数は少なかった．

Bembidiini ミズギワゴミムシ族

7. *Bembidion daisetsuzanum* Habu ダイセツミズギワゴミムシ

土生1)によって最初に報告された．その後中根14)，保田27,29)および諏訪20)が記録している．

大雪山の特産種で，高地帯（1,600 m 以上）に生活し，山頂部にも普通である．特に水辺や雪渓の消えたばかりの湿地に多い．

赤石川の河原，北海平の湿地の石下で得られた．個体数はやや多かった．

Pterostichini ナガゴミムシ族

8. *Pterostichus thunbergi* Morawitz エゾナガゴミムシ

大雪山からは最初中根14)が *P. sejunctus* Bates として報告している．その後諏訪20)，保田29)および西原ら18)が記録した．

北海道のみに分布し，低山帯や亜高山帯などの森林地に最も普通で，高地帯になるに従って生息密度は低くなり，また，体型は小さくなる．高地帯では高山植物の生えている石下で得られることが多い．夜間活発に行動し，高山植物帯・ハイ松帯などで pitfall traps でよく採集される．

北海平と黒岳石室付近の枯葉の下から得られたが，個体数は少なかった．

9. *Pterostichus subgibbus* Mannerheim エゾヒメナガゴミムシ

中根14)，諏訪20)および保田29)の報告がある．

大雪山では，主に水辺や雪渓などの湿地に生活している高地性の種類で，大雪山以外からはまだ報告がない．さらに，高地帯では本種に近似種の未同定のものが2～3種発見されているので，本種を含めて再検討を必要とする．

赤石川の周辺，白雲分岐および北海平で得られた．個体数は多かった．

10. *Pterostichus subrugosus* Straneo キタアラメナガゴミムシ

わが国では大雪山の特産種で，海外では樺太に分布する．

大雪山では高地帯（1,700 m 以上）にのみ生息し，主として山頂や尾根の礫地帯の石下で生活する．8月中旬に交尾中の個体をよく目撃する．

北海平の尾根の石下で得られたが，個体数は比較的多かった．

Platynini ヒラタゴミムシ族

11. *Agonum yezoanum* (Nakane) エゾヒメヒラタゴミムシ

大雪山から中根14)や保田29)の報告がある．

北海道からのみ知られ，井上6,8)が報告したように平坦地にも普通で，高山地帯にまで分布するが，低山帯や平坦地に比較すると生息密度ははるかに低い．主として湿地の落葉下や

石下に生息する．

赤石川の河原の湿地の石下で得られた．個体数はやや多いほうである．

Harpalini ゴモクムシ族

12. *Harpalus torridoides* REITTER キタゴモクムシ

大雪山からは諏訪[20)]が最初に報告した．また，田中[21)]は芦別から記録しているが，採集地点はおそらく芦別岳かその周辺の山岳と思われる．

本種はわが国では北海道にのみ分布し，また，海外では東部シベリアから知られている．山地性の種類であるらしく，大雪山では高地帯でしか得られない．

北海平の高山植物の生えている石下で１頭採集された．

Lebiini アトキリゴミムシ族

13. *Cymindis subarctica* KANO キタアトキリゴミムシ

中根[14)]，諏訪[20)]および保田[27,29)]の報告がある．

わが国では北海道からのみ，また海外では千島および樺太から知られている．大雪山では比較的乾いた礫地の石下に生息している．

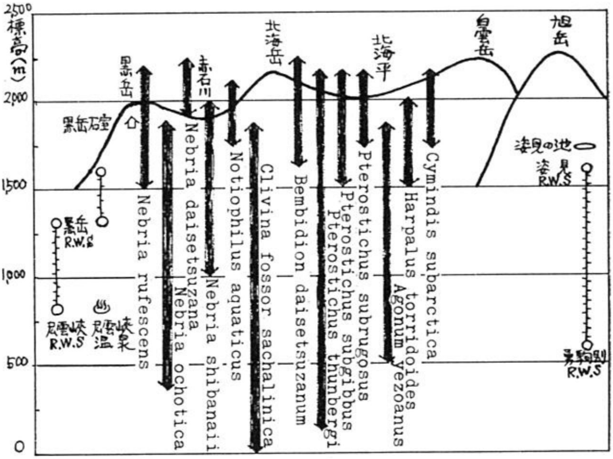
北海平や白雲分岐の石下から得られたが，個体数は少なかった．

要　　約

1. 1977年８月５日から７日に大雪山の主として標高 1,500 m 以上の天然記念物特別保護区において，ゴミムシ類を調査した．

2. 今回報告のゴミムシ類は13種であった．これらの種類は，いずれも従来大雪山から記録のあったものばかりである．

3. わが国で大雪山にのみ生息する種類はダイセツマルクビゴミムシ，ダイセツミズギワゴミムシ，キタアラメナガゴミムシおよびエゾヒメナガゴミムシの



第２図．大雪山におけるゴミムシ類の垂直分布．

4種であった.

4. 分布が広く，個体数の多いのはキタマルクビゴミムシ，ダイセツマルクビゴミムシ，ルリマルクビゴミムシ，ダイセツミズギワゴミムシ，キタアラメナガゴミムシおよびエゾヒメヒラタゴミムシの6種であった.

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Summary

1. The survey of Carabidae was carrid out by the present authors at a special protection district of Mt. Daisetsu above 1,500 m altitudes, and the survey term was from 5 to 7 August in 1977.

2. 13 species of Carabidae were collected in Mt. Daisetsu. All of these species have already reported.

3. The special species only live in the Daisetsu in Japan were *Nebria daisetsuzana*, *Bembidion daisetsuzanum*, *Pterostichus subrugosus* and *P. subgibbus*.

4. Following 6 species were abundant and distributed in all area: *Nebria daisetsuzana*, *N. rufescens*, *N. shibanaii*, *Bembidion daisetsuzanum*, *Pterostichus subrugosus* and *Agonum yezoanum*.

第29回（昭和52年度）大会記録

第29回大会を昭和52年12月4日午前10時から大阪市立自然史博物館において開催した．石田幹事の司会により，まず大倉幹事から会務会計報告が行われた後，林幹事が座長となり“甲虫界の最近の動き，特に生活史について”の座談会が開催された．♀しか知られていなかったハムシや *Kurarua*（モモブトカミキリ属）も南方では♂♀が見つかること，一般に北方へ行くと♀のみという傾向があり，魚のフナでも北では♀ばかりになる．また，昆虫の分布の広がりは気流によるだけではなく，葉の中に潜る幼虫でも海流により分布を広げ得るから，或る種が両島にいるから昔は陸続きであったという単純な推論はなりたたない等々，その生活について種々の意見がのべられた．

当日の出席者（敬称略）はつぎのとおり．秋山黄洋・番野　擴・中條道崇・後藤光男・畑山武一郎・林　匡夫・林　靖彦・平松広吉・穂積俊文・伊賀正汎・生谷義一・今坂正一・井上尚武・石田　裕・石浜宣夫・石原俊雄・出雲善浩・鎌刈哲二・木元新作・黒澤良彦・正木清・的場　績・水野弘造・水沼哲郎・奈良　一・小田覚三・大倉正文・大石久志・佐藤正孝・澤田高平・高羽正治・田村　保・上田和彦・八木正道・山地　治．（大倉）

久米島のオサムシ類について

楠　井　善　久

The Carabid Beetles from Kume-jima Island of the Ryukyu Archipelago

By Yoshihisa Kusui

琉球列島のオサムシ科の採集記録はいくつか発表されているが，沖縄本島から，その属島である久米島を分けて扱った報告はあまりみられない．また，久米島の昆虫相については高良・東（1974）1) によりまとめられているが，オサムシ科のものは記録されていない．筆者は1975年8月および1976年7月に同島において採集を行ない，下記の種類を得ることができたので報告したい．

なお，同定および地理的変異の有無に関して田中和夫博士のご指導を賜り，また，採集地では北野龍海氏のご協力を得たことを記して，厚くお礼申しあげる．

CICINDELIDAE

1. *Cicindela* (*Myriochile*) *specularis* Chaudoir コハンミョウ
   2♂♂, Mt. Ufudake, Aug. 25, 1975; 1♀, Gushikawa-son, July 23, 1976.

CARABIDAE

2. *Calosoma* (*Campalita*) *chinense* Kirby エゾカタビロオサムシ
   1♀, Mt. Ufudake, Aug. 24, 1975.

HARPALIDAE

3. *Colpodes teruyai* Habu テルヤモリヒラタゴミムシ
   1♂, Gushikawa-son, July 23, 1976.
4. *Colpodes* (*Metacolpodes*) *buchanani* Hope オオアオモリヒラタゴミムシ
   1♀, Nakazato-son, July 23, 1976; 1♀, Gushikawa-son, July 23, 1976.
5. *Platymetopus flavilabris* Fabricius カラカネゴモクムシ
   1♂, Mt. Ufudake, July 22, 1976; 2♀♀, Ôbu-shima, July 24, 1976.

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1) 久米島の昆虫相，1974，久米島県立自然公園候補地学術調査報告，71–88.

〔昆虫学評論，第32巻，第1/2号，133–134頁，1978年，12月〕

6. *Anoplogenius cyanescens* HOPE キベリゴモクムシ
   1♀, Gushikawa-son, July 22, 1976; 1♀, Mt. Ufudake, July 22, 1976.
7. *Stenolophus* (*Egadroma*) *quinquepustulatus* WIEDEMANN イツボシツヤゴモクムシ
   1♀, Mt. Ufudake, July 22, 1976.
8. *Chlaenius* (*Spilochlaenius*) *micans* FABRICIUS オオアトボシアオゴミムシ
   1♂, Mt. Ufudake, Aug. 25, 1975; 1♂1♀, Nakazato-son, July 24, 1976.
9. *Chlaenius* (*Chlaeniostenus*) *cricumdatus* BRULLÉ コキベリアオゴミムシ
   1♀, Nakazato-son, July 24, 1976.
10. *Parena* (*Parena*) *amamiooshimensis* HABU アマミクロヘリアトキリゴミムシ
   2♂♂, Gushikawa-son, July 23, 1976.

青森県の歩行虫科，1

下山健作

List of Carabidae from Aomori Prefecture, Japan (I)

By Kensaku Shimoyama

昭和10年からゴミムシの調査を心掛けてきたが，山地の近くにばかり住んでいたので海浜性の種類は少ない．その間，矢野由雄・吉田晶・大倉正文の諸氏に同定していただいたが全体をまとめるには至らなかった．今回，土生昶申博士の同定を得て発表する次第である．

また，青森県立郷土館の津軽半島北端部の総合調査や青森県立五所川原農林高等学校自然科学部の調査にも毎回参加し得たし，阿部東・今純一・竹越富美子・佐藤周二，明兄弟・杉木隆・笹森耕二の諸氏から標本の援助を受けた．記して深謝の意を表する．

最後に，この目録をまとめることができたのは，ご指導・ご同定下さった諸氏のお陰であり，特に3年にわたってご同定下さった土生博士には心からお礼申しあげる．

なお，記録は，a：分布，b：採集地名（北東から南西の順に配列）と年月日（できるだけ省略），c：観察（ほとんどの種は成虫で越冬“11月〜4月”する）およびその他とした．

1. *Calosoma* (*Calosoma*) *maximowiczi* (Morawitz, 1863) クロカタビロオサムシ

a：北海道・本州・四国・九州；済州島・朝鮮・満洲・東シベリア・支那・台湾．

b：鶴田 (16. VII. 1976)，十二湖 (23. VI. 1968)，岩木山 (5. VIII. 1962)，柏木 (16. VIII. 1950)，尾崎 (15. V. 1939)，蛭貝沢 (20. VI. 1940 ; 6. VIII. 1942)，酸ケ湯 (8. VIII. 1972)，浮島 (6. VIII. 1942)，大木平 (20. VII. 1954)，十和田 (20. VI. 1958 ; 10. VIII. 1970)，谷地 (16. VIII. 1973)，田面木，桔梗野，笹子 (6. VII. 1967)，道佛 (30. VII. 1962)．

c：5〜8月．成虫は年により5月中旬から現われることもあるが，活動の旺盛なのは7月中旬から8月中旬で，地上を這っているか，樹幹をつたっているのを見ることが多く，このころ交尾しているのが見られる．また体長 20 mm 程度，背面赤褐色味のある小形のものは蛭貝沢で6月中旬に交尾し赤土に産卵するのが見られた．棲息は山地であるが，阿部東氏は平地の柏木農業高校のリンゴ園の樹上でマイマイガ幼虫を捕食しているのを観察したという．

1941年の7月末に櫛ケ峯の横岳頂上付近の木が裸になって冬山のように見えていたが，8月初めに 5 km ほど離れた蛭貝沢林道のブナ林を歩いていると，パラパラ・ポタンポタンと音がするので雨かと見上げると，ブナの葉をガの幼虫が食っている音と糞の落ちる音であっ

〔昆虫学評論，第32巻，第1/2号，135–150頁，1978年，12月〕

た．ガの幼虫は樹幹や地上を這っていて，そのあたりにはガの幼虫を捕食するクロカタビロオサムシが足のふみ場もないほど見られた．また，翌年8月6日には浮島から兎平にかけての林道でも同じようなことが観察された．

本種はブナの葉を食うガの幼虫が大発生する年には無数に見られるが，普通の年にはあまり見ることができない．また，ガの幼虫は8月中旬には蛹化するので，そのころになると本種を見うけることも少なくなる．

2. *Calosoma* (*Calosoma*) *inquisitor cyanescens* MOTSCHULSKY, 1859
アオカタビロオサムシ

a：北海道・本州（北部）；東シベリア・満洲．

b：飯詰（6. VI. 1976)，十二湖（23. VI. 1962；15. VIII. 1965)，弥生（26. V. 1963；17, 24. V. 1970)．

c：阿部氏が岩木山麓の弥生から採った1頭しかなく，土生昶申博士に同定していただいた．

3. *Calosoma* (*Campalita*) *chinense* KIRBY, 1819 エゾカタビロオサムシ

a：北海道・本州・四国・九州；朝鮮・満洲・支那・東シベリア・樺太．

b：高山稲荷（9. VIII. 1969)，平滝沼（13. IX. 1967)，金木（6. VI. 1968；18. IX. 1966)，長平（23. VI. 1975)，飯詰（8. VI. 1968)，板柳（9. VII. 1971)，馬場尻（28. V. 1946)，田面木，根城，笹子（26. VII. 1965)，新井田，長根（18. VII. 1972)，道佛（20. VIII. 1960)．

c：5〜9月．馬場尻で堆肥の中の炭俵から出てきた．金木や飯詰では灯火にきていた．平滝沼では草むらにかけたサンマの缶詰のトラップに落ち込んでいた．青森県では数の少ない種である．

4. *Carabus* (*Hemicarabus*) *tuberculosus* DEJEAN et BOISDUVAL, 1829 セアカオサムシ

a：北海道・本州・四国・九州；済州島・朝鮮・樺太・シベリア．

b：尻屋（15. VIII. 1968)，百沢（12. VII. 1954)，南田中（8. V. 1945)，青荷（4. VI. 1942)，葛川（20. VI. 1957)，大木平（20-25. VI. 1954；30. VII. 1954；15. VIII. 1955)，温川（30. VII. 1952；21. VIII. 1954)，道佛（4. VIII. 1960)．

c：5〜8月．平地の尾上町の学校園の草むらでよく見られた．また，山地では1954〜55年に大木平の開墾したばかりの畑にアワヨトウガの幼虫が大発生した時に多くの個体が観察されたが，その後は全く見られなくなった．平地・山地ともに産するがあまり見あたらない種のようである．

5. *Carabus* (*Apotomopterus*) *insulicola insulicola* CHAUDOIR, 1869 アオオサムシ

a：本州（東北・関東・中部東方)．

b：中里（19. III. 1972)，三内，浪館，金浜，戸山，浅虫（15, 18, 29. X. 1976)，小川原

(15. VI. 1973)，深浦 (15. VIII. 1971 ; 29. IX. 1972 ; 2. X. 1972)，小沢 (4. XII. 1948)，温湯 (28. IV. 1941)，城山 (26. VII. 1972)，名久井岳 (15. VI. 1973)，田面木，八幡，長者，種差 (2, 23. VI. 1973)，階上岳 (15. IX. 1973).

c：5〜9月．温湯ではリンゴ園に続く林地，中里では林道わきの土中に越冬中のものを見た．小沢ではカヤを刈って積んである下で越冬していた．標高200 m以上のところには見られないようである．越冬は成虫態で土中に入ってなされる．

6. *Carabus* (*Apotomopterus*) *japonicus freyi* VAN EMDEN, 1932 クロオサムシ

a：本州（東北・北関東・中部北方）・佐渡・粟島.

b：中里 (16. VIII. 1965 ; 12. X. 1971)，飯詰 (20. IV. 1966)，深浦 (16. IX. 1972 ; IX. 1975)，十二湖 (20. VI. 1970)，蛭貝沢 (16. X. 1942 ; 13. VI. 1947)，青荷 (11. VI. 1940)，小木平 (20. VI. 1954)，蔦 (15. VII. 1973)，焼山 (15. VII. 1973)，名久井岳 (3. VI. 1973)，天狗沢，笹子，新井田，種差，金浜 (25. VII. 1972 ; 5. VII. 1973)，階上岳 (15. IX. 1973).

c：青荷で路上を這っているのを見たのが最初である．蛭貝沢 (1947) では林道わきの赤土の穴に入りかけたのを見た．越冬は朽木なのか，土中なのか，全くわからなかったが富岡康治氏は崖の土中で越冬しているのを確認したという．

7. *Carabus* (*Carabus*) *vanvolxemi* PUTZEYS, 1875 ホソアカガネオサムシ

a：本州（東北・関東山地）・佐渡.

b：片刈石 (11. VIII. 1975)，冬部沢 (18. VIII. 1973)，梵珠山 (18. XI. 1967)，小栗山 (5. XII. 1977)，温湯 (1. V. 1939)，酸ケ湯 (23. IX. 1967)，大木平，温川 (3. XI. 1964)，谷地 (15. VII. 1973)，十和利山 (15. VII. 1973)，名久井岳 (20. V. 1973).

c：酸ケ湯では缶詰の液によってきたもの，落葉の間から出てきたものなどを見た．温湯周辺の低山地には1940年ころ多産したが，近年は少なくなった．深山地帯には数が少ない．越冬は朽木の中が多く，コクロナガオサムシと同居していることもある．

8. *Carabus* (*Carabus*) *granulatus yezoensis* BATES, 1883 エゾアカガネオサムシ

a：北海道・本州（東北北部）.

b：緑川 (5. V. 1970)，柴田 (28. X. 1938 ; 25. IV. 1968)，繁田 (9. IV. 1978).

c：阿部氏が柴田村 (1968) でサルケ（泥炭）を切って積んであったものに越冬中の個体を発見し，青森県に産することが確実となった．今のところ西津軽郡の柴田村と稲垣村など，岩木川下流の湿地帯のみから得られるにすぎない．繁田産は朽木に越冬していた．

9. *Carabus* (*Asthenacarabus*) *opaculus shirahatai* NAKANE, 1960 ヒメクロオサムシ

a：本州（東北部）.

b：岩木山 (29. VII. 1957 ; 28. VII. 1961 ; 3. IX. 1972 ; 22. VIII. 1974 ; 1. IX. 1974)，八甲田 (23. IX. 1967 ; 1. VIII. 1968 ; 3. IX. 1968 ; 18. VIII. 1973).

c：青森県では岩木山・八甲田山に産する． 阿部氏は岩木山の種蒔苗代の近くにかけたトラップから2頭，八甲田山大岳の山頂付近の石下から2頭見つけている．

10. *Carabus* (*Leptocarabus*) *exilis exilis* Bates, 1883 コクロナガオサムシ

a：本州（東北地方）・佐渡．

b：矢形石山，片刈石（11. VIII. 1975），中里（16. IV. 1966），青鹿山（6. V. 1970），小栗山（5. XII. 1977），尾崎，矢捨，温湯，黒森（1. V. 1939；19. XI. 1941），櫛ケ峯（15. VII. 1964），酸ケ湯，八甲田（18. VIII. 1946），青荷（21. XI. 1968），大木平，温川，十和田（16. VIII. 1946；5. XI. 1954），善光寺平（4. VIII. 1968），谷地，燒山，宇樽部（18. VIII. 1946），戸来岳，十和利山，迷平（26. VII. 1973），夏坂，弥勒滝（24. VIII. 1973），名久井岳（3. VI. 1973），天狗沢，笹子（15. X. 1973），階上岳（31. VII. 1972）．

c：低山から高地まで林内に多い．成虫で朽木内に越冬するが，土中でも行なわれる．

11. *Carabus* (*Leptocarabus*) *procerulus procerulus* Chaudoir, 1862 クロナガオサムシ

a：本州．

b：薬研（16. VII. 1973），小川原（15. VI. 1973），燒山（15. VII. 1973），迷ケ岱（9. VIII. 1975），夏坂（15. VI. 1973），弥勒滝（26. VIII. 1973），城山（6. IX. 1975），笹子，長者，大久保（12. VI. 1972；4. VIII. 1972），階上岳（23. VII. 1972；15. IX. 1973）．

c：南部地方では下北郡・上北郡・三戸郡・八戸市と全域に分布するが，津軽地方からは全く発見されない種である．筆者の採集品は，下北郡大畑町の薬研温泉で，朽木にいたオオキノコムシ類の幼虫を捕食するために来ていた1頭のみである．

12. *Carabus* (*Limnocarabus*) *clathratus maacki* Morawitz, 1862 マークオサムシ

a：本州（東北地方）；満洲・東シベリア．

b：下繁田（5. V. 1968），館岡（12. IX. 1962），中市（2. VIII. 1973）．

c：1930年ころ，西津軽郡のサルケ地帯にいるといわれていて，故古川兵衛氏に柴田村産の本種を見せてもらったことがある．阿部氏は，1959年4月に木造町の館岡のサルケを切り取って積んである下から翅のみ拾った．また，1962年9月に館岡の水田の畦道の草を刈って積んであるところから1頭，1968年5月に稲垣村下繁田で水路を切り開いた時に掘り起し積んであったサルケに窩を作って越冬しているのを2頭見つけている．

1930年ころは，かなり見られたらしいが，最近は水田に農薬が散布され本種も生活しにくくなったためか，ほとんど見つからなくなってしまった．

13. *Damaster blaptoides viridipennis* Lewis, 1880 キタマイマイカブリ

a：本州（東北地方）．

b：中里（19. III. 1972），飯詰（8. XI. 1966），野辺地（15. IX. 1941），深浦（16. IX. 1972），青鹿山（9. VIII. 1974），十二湖（17. VIII. 1964），白神岳（21. VI. 1971），岩木山（29. V. 1975），小栗山（5. XII. 1977），尾崎，矢捨（30. III. 1940；10. XI. 1962），温湯，

二庄内，青荷（29. III. 1940 ; 24. XI. 1968），葛川，大木平（16. V. 1957），温川，十和田（16. VII. 1946），蛭貝沢，八甲田（13. VII. 1940 ; 12. VIII. 1973），谷地，焼山（15. VIII. 1973），十和利山，迷ケ岱（9. VIII. 1975），四角岳，弥勒滝（26. VIII. 1973），城山（7. VI. 1975），名久井岳（3. VI. 1973），田面木，桔梗野，天狗沢，番屋，金浜（5. VII. 1972），階上岳（31. VII. 1972）.

c：蛭貝沢で切株の上（19. VII. 1942）にいたもの，朽木（20. X. 1944）にいて越冬場所を探していたもの，また，十和田山地で切株の液（1946）を吸っていたもの，オヒョウの倒木下（5. VII. 1953）でオオキノコムシ類の幼虫をあさっていたものなど，活動中のものは見る機会が少なく，朽木中に越冬しているか，トラップに落ち込んだのを観察することが多い.

幼虫は7～9月ころ地上を這っているのをよく見るが，カタツムリを食っているのを観察できたのは十和田（23. VII. 1962）と櫛ケ峯（22. VII. 1974）などである.

越冬姿勢は，横向きのもの，縦に頭を上にしているもの，這っているような姿のものなどがあり，2～3頭かたまって入っていたり，コクロナガオサムシと一緒に入っているものもあった．また，朽木の中に入っていることが多いが，土中で越冬しているものもある.

14. *Omophron limbatus aequalis* MORAWITZ, 1863 カワラゴミムシ

a：北海道・本州・四国・九州；朝鮮・台湾・支那・シベリア.

b：馬場尻（5. VIII. 1947），温湯（5. VI. 1943 ; 26. IX. 1944），葛川（8. VI. 1956）.

c：温湯・葛川では浅瀬石川の川原の砂の中から出てきた．馬場尻では灯火に飛来した.

15. *Nebria* (*Eunebria*) *lewisi* BATES, 1874 カワチマルクビゴミムシ

a：本州・四国・九州.

b：沖浦（11. VI. 1972），葛川（4. X. 1949 ; 8. X. 1954 ; 11. X. 1957）.

c：浅瀬石川の川原の石下から得た．沖浦の6月のものは羽化したばかりであった.

16. *Nebria* (*Paranebria*) *macrogona* BATES, 1873 オオマルクビゴミムシ

a：北海道・本州・四国・九州.

b：増川（7. VII. 1974），追良瀬川（16. VI. 1973），温湯（7. XI. 1941），沖浦（11. VI. 1972 ; 15. VI. 1974），葛川（28. X. 1954），十和田（18. VI. 1947）.

c：川原の石下に多い．十和田産と沖浦産（1974）のものは羽化したばかりのものであった.

17. *Nebria* (*Paranebria*) *ochotica* SAHLBERG, 1844 クロマルクビゴミムシ

a：北海道・本州；朝鮮・東シベリア.

b：青鹿山（9. VIII. 1974），白神岳（21. VI. 1971），追良瀬川（10. VIII. 1973），岩木山（3. IX. 1972），蛭貝沢（24. V. 1942），温川（18. X. 1954），十和田（16. VIII. 1946）.

c：川原や十和田湖畔などから得られる．岩木山では頂上まで棲息している.

18. *Nebria* (*Paranebria*) *reflexa reflexa* Bates, 1883 ヒメマルクビゴミムシ

a：本州.

b：白神岳（21. VI. 1971），追良瀬川（15. VI. 1973；10. VIII. 1973）.

c：白神岳のものは羽化したばかりのものであった.

19. *Nippononebria chalceola chalceola* (Bates, 1883) ミヤママルクビゴミムシ

a：本州.

b：蛭貝沢（12. VII. 1942），青荷（12. V. 1942；18. VIII. 1947）.

c：道路わきの崖からくずれてきた土の中に多く見られる.

20. *Nippononebria pusilla pusilla* (Uéno, 1955) チビマルクビゴミムシ

a：本州.

b：八甲田（9. VIII. 1970）.

c：本州の中部山岳地帯に産することが知られているが，八甲田大岳から佐藤周二氏が採集したことがある.

21. *Notiophilus impressifrons* Morawitz, 1862 ミヤマメダカゴミムシ

a：北海道・本州・四国・九州；朝鮮・満洲・支那・東シベリア.

b：矢捨（22. VI. 1963），温湯（1. V. 1941），蛭貝沢（6. VII. 1947），十和田（12. VII. 1957）.

c：蛭貝沢では道路わきの土中から出てきたものや，切株のところに見られた．低山地の矢捨や温湯では林内を這っていることがある.

22. *Elaphrus japonicus* Uéno, 1954 オオハンミョウモドキ

a：本州（関東以北）.

b：蛭貝沢（19. VIII. 1945），青荷（19. V. 1946），大木平（11. VI. 1950），滝ノ股（5. V. 1954）.

c：5〜6月の雪の消えたばかりの，草の伸びていない山間の湿地の枯草の上を歩くと，本種の動くのが見られる．7月以後は草が茂るためか見あたらず，8月に蛭貝沢でただ1頭見かけただけである.

23. *Scarites* (*Parallelomorphus*) *aterrimus* Morawitz, 1863 ヒョウタンゴミムシ

a：北海道・本州・四国・九州；朝鮮・満洲・支那.

b：高野（4. VI. 1938），小泊（12. VI. 1973），黒崎（21. VI. 1971）.

c：西津軽郡の高野産を1頭所持しており，その後見かけなかったが，1971年に阿部氏が黒崎の海岸で海草の下から1頭採集した．また，小泊村の冬部沢海岸の波打際で午後9時ころ，ダンゴムシを捕食している本種を多数観察した．昼間はほとんど見られず，夜間に活動する種である.

24. *Scarites* (*Scarites*) *sulcatus* OLIVIER, 1795 オオヒョウタンゴミムシ

a：本州・四国・九州；朝鮮・台湾・支那・東南アジア.

b：深浦 (19. VIII. 1954).

c：阿部氏が，深浦の海岸に捨てられていた長靴の中に入っていた1頭を採ったという以外には，採集されたということを聞かない.

25. *Clivina niponensis* BATES, 1873 ヒメヒョウタンゴミムシ

a：本州・四国・九州；東支那.

b：十二湖 (15. VIII. 1964).

c：十二湖産以外，青森県産のものは手許にはない.

26. *Clivina vulgivaga* BOHEMAN, 1858 コヒメヒョウタンゴミムシ

a：北海道・本州・四国・九州；台湾・支那.

b：馬場尻 (10. IX. 1946；24. VII. 1947).

c：馬場尻で住宅の下水の流れる湿ったところに見られた.

27. *Clivina fossor sachalinica* NAKANE, 1952 カラフトヒメヒョウタンゴミムシ

a：北海道・本州（東北山地帯).

b：櫛ケ峯 (12. VII. 1964).

c：櫛ケ峯の頂上近くの湿地から見つかっている.

28. *Dyschirius* (*Dyschirius*) *ovicollis* PUTZEYS, 1873 ダイミョウチビヒョウタンゴミムシ

a：本州・四国・九州；朝鮮・満洲・支那.

b：冬部沢 (18. VIII. 1974)，馬場尻 (30. IX. 1947)，柏木 (6. VI. 1975)，温湯 (10. VII. 1942；30. IX. 1942)，葛川 (21. VIII. 1957)，十和田 (29. V. 1958).

c：温湯・馬場尻・井戸沢・葛川では建物の陰地，畑地などにいる．十和田湖畔では砂地，冬部沢林道では石下から見つかった．交尾は7月下旬～8月上旬に見られた.

29. *Dyschirius* (*Dyschirius*) *sphaerulifer* BATES, 1873?

マルクビチビヒョウタンゴミムシ

a：本州.

b：柏木 (1. VIII. 1975).

c：畑地から見つかったが，珍らしい種である.

30. *Dyschirius* (*Dyschirius*) *hiogoensis* BATES, 1873 コチビヒョウタンゴミムシ

a：本州；支那・沿海州.

b：館岡 (9. VIII. 1964).

c：阿部氏が西津軽郡木造町の館岡から採集している.

31. *Craspedonotus tibialis* SCHAUM, 1863 オサムシモドキ

a：北海道・本州・四国・九州；朝鮮・台湾・満洲・支那.

b：十三湖（30. VII. 1956），合浦（25. VIII. 1943），南田中（7. VII. 1945），温湯（10. VII. 1942），葛川（29. VIII. 1956），田面木，根城，笹子（20. VIII. 1965）.

c：砂地に穴を掘ってかくれているのが普通である.

32. *Eobroscus lutshniki* (BOUBAL, 1928) ムラサキスジアシゴミムシ

a：北海道・本州；樺太・東シベリア・支那.

b：小泊（20. VI. 1968），八甲田（7. VIII. 1973）.

c：可成り珍しい種であって，小泊と八甲田産のもの以外は見たことがない.

33. *Trechiama oreas* (BATES, 1883) イワキナガチビゴミムシ

a：本州（東北地方）.

b：赤滝（6. VII. 1947）.

c：櫛ケ峯の続きの横岳の赤滝沢にころがっていた朽木の中から1頭見つかった．標高700～800 m くらいのところであった．（上野俊一博士同定）.

34. *Trechus* (*Epaphius*) *ephippiatus* BATES, 1873 ヒラタキイロチビゴミムシ

a：北海道・本州・四国・九州；朝鮮・満洲・支那.

b：馬場尻（10. IX. 1947），柏木（18. VI. 1971）.

c：平地や低山地に普通で，電灯にもくる.

35. *Tachys* (*Tachyura*) *exaratus* BATES, 1873 ヒラタコミズギワゴミムシ

a：本州・四国・九州；東支那.

b：温湯（6. V. 1942），葛川（26. X. 1954），十和田（23. VIII. 1964）.

c：川原・湿地などに見られる.

36. *Tachys* (*Tachyura*) *fuscicauda* BATES 1873 ウスモンコミズギワゴミムシ

a：北海道・本州・四国・九州・屋久島・種子島；東支那.

b：馬場尻（13. IX. 1946），柏木（18. VI. 1971），新屋（26. V. 1972），矢捨（26. IV. 1959），温湯（6. V. 1956），大川原（28. IX. 1944），葛川（30. VI. 1955），十和田（29. V. 1948；23. IX. 1948）.

c：平地・山地とも水辺や落葉下などに多い.

37. *Tachys* (*Tachyura*) *laetificus* BATES, 1873 ヨツボシコミズギワゴミムシ

a：北海道・本州・四国・九州；支那.

b：十二湖（14. VIII. 1964），柏木（2. VI. 1968），温湯（6. V. 1942），葛川（20. IX. 1957）.

c：川原の石下や畑地に普通である.

38. *Tachyta nanus* (Gyllenhal, 1810) クロチビカワゴミムシ

a：北海道・本州・四国・九州；全北区.

b：冬部沢 (19. VIII. 1974), 十二湖 (15. VIII. 1964), 新屋 (9. IX. 1973), 青荷 (18. VI. 1942), 温川 (27. V. 1956).

c：普通種で，どこの朽木でもやや乾燥したものの皮下に多い.

39. *Bembidion* (*Notaphocampa*) *niloticum batesi* (Putzeys, 1875)
アトモンミズギワゴミムシ

a：北海道・本州・四国・九州・奄美諸島；台湾・支那・印度支那.

b：冬部沢 (24. VI. 1973), 蛭貝沢 (13. VII. 1947), 葛川 (12. VIII. 1975).

c：川原の砂地や湿地に見られる.

40. *Bembidion* (*Pseudolimnaeum*) *galloisi* Netolitzky, 1938 ガロアミズギワゴミムシ

a：北海道・本州・四国・九州・屋久島.

b：増川 (8. VII. 1974), 七ツ滝 (26. VII. 1975), 十二湖 (21. VI. 1970), 白神岳 (21. VI. 1971), 追良瀬石川 (10. VIII. 1973), 蛭貝沢 (24. V. 1942), 赤滝 (5. IX. 1943), 温川 (4. VI. 1956), 十和田 (11. VIII. 1970).

c：川原の石下・湿地などに産する. また，道路わきの土中からも得られる.

41. *Bembidion* (*Peryphus*) *dolorosum* (Motschulsky, 1850) チシマミズギワゴミムシ

a：北海道・本州 (北端)；千島.

b：追良瀬川 (10. VIII. 1973).

c：川原の石下から見つかる.

42. *Bembidion* (*Peryphys*) *echigonum* Habu et Baba, 1957 エチゴアオミズギワゴミムシ

a：本州.

b：青鹿山 (9. VIII. 1974), 滝ノ股 (18. VIII. 1952), 十和田 (16. VIII. 1946).

c：十和田では湖畔，滝ノ股や青鹿山では川原の石下にいる.

43. *Bembidion* (*Peryphus*) *pseudolucillum* Netolitzky, 1938
ヒラタアオミズギワゴミムシ

a：北海道・本州・四国・九州.

b：大川原 (10. V. 1942), 蛭貝沢 (24. V. 1942), 葛川 (12. IX. 1958), 十和田 (15. VIII. 1946).

c：湖畔・川原などの石下にいる.

44. ***Bembidion*** (***Peryphus***) ***cnemidotum*** (Bates, 1883) ウスモンミズギワゴミムシ

a：北海道・本州・四国・九州.

b：温湯 (18. XI. 1941), 葛川 (19. VI. 1959), 温川 (18. X. 1954).

c：川原の石下にいる.

45. ***Bembidion*** (***Peryphus***) ***morawitzi*** Csiki, 1928 ヨツボシミズギワゴミムシ

a：北海道・本州・四国・九州；朝鮮.

b：柏木 (4. V. 1967 ; 22. VIII. 1970), 矢捨 (18. VI. 1971), 温湯 (18. VI. 1940).

c：川原・畑地などに見られる.

46. ***Bembidion*** (***Peryphus***) ***semiluniun*** Netolitzky, 1914 ツマキミズギワゴミムシ

a：北海道・本州・四国・九州.

b：岩木山 (5. VIII. 1962), 馬場尻 (15. VII. 1947), 柏木 (22. VIII. 1970), 矢捨 (13. V. 1973), 櫛ケ峯 (12. VII. 1964), 葛川 (20. IX. 1957).

c：普通種で平地・山地ともに産する.

47. ***Bembidion*** (***Peryphus***) ***scopulinum*** Kirby, 1837 キモンナガミズギワゴミムシ

a：北海道・本州；朝鮮・北支・東シベリア.

b：平滝沼 (10. VIII. 1967), 追良瀬川 (16. VI. 1973), 葛川 (20. VII. 1955), 温川 (26. X. 1954).

c：川原の石下などから発見される.

48. ***Bembidion*** (***Peryphus***) ***thermoides*** Nakane, 1963 ヒメモンナガミズギワゴミムシ

a：本州 (東北地方・近畿).

b：十二湖 (16. VIII. 1965), 青荷 (4. VI. 1942).

c：稀な種のようで, 手許には土生博士に同定していただいた2頭よりない.

49. ***Bembidion*** (***Peryphus***) ***sanatum*** (Bates, 1883) ミヤマミズギワゴミムシ

a：本州 (山地帯).

b：新屋 (9. I. 1973), 青荷 (18. VIII. 1947), 葛川 (8. X. 1954), 十和田 (6. VI. 1955).

c：崖の土中から出てくる.

50. ***Bembidion*** (***Peryphus***) ***misellum*** (Harold, 1877) ニッコウミズギワゴミムシ

a：本州.

b：矢捨 (16. VIII. 1965), 温湯 (5. V. 1942), 櫛ケ峯 (12. VII. 1964), 葛川 (19. VI. 1959), 大木平 (27. VI. 1952), 十和田 (12. VI. 1955), 善光寺平 (15. VII. 1970).

c：温湯・矢捨などの低山地から, 十和田・櫛ケ峯などの高地まで最も普通に棲息している.

51. *Bembidion* (*Trichoplataphus*) *lissonotum* (BATES, 1873) オオアオミズギワゴミムシ

a：本州・四国・九州；朝鮮・支那・東シベリア.

b：温湯 (18. XI. 1941)，葛川 (20. VII. 1955；12. IX. 1958).

c：湖畔・川原の石下から見つかる.

52. *Bembidion* (*Trichoplataphus*) *oxyglymma* (BATES, 1883) クロミズギワゴミムシ

a：本州・四国・九州.

b：追良瀬川 (10. VIII. 1973)，温湯 (19. XI. 1941)，葛川 (12. IX. 1957).

c：湿地・川原などに産する.

53. *Bembidion* (*Plataphus*) *lucillum* (BATES, 1883) ハコネミズギワゴミムシ

a：北海道・本州・四国・九州.

b：増川 (8. VII. 1974)，大川原 (10. V. 1942)，葛川 (11. X. 1957)，十和田 (15. VIII. 1946).

c：葛川 (21. VI. 1957) のものは羽化したばかりのものであった.

54. *Bembidion* (*Hirmoplataphus*) *pliculatum* (BATES, 1883) ヒメスジミズギワゴミムシ

a：北海道・本州・四国・九州.

b：温湯 (8. V. 1942)，葛川 (30. VI. 1955).

c：数はあまり多くない種である.

55. *Bembidion* (*Plataphodes*) *tetraporum tetraporum* (BATES, 1883) ヨツアナミズギワゴミムシ

a：北海道・本州 (山地帯).

b：白神岳 (21. VI. 1971)，葛川 (30. IX. 1958).

c：川原の石下から発見される.

56. *Bembidion* (*Chrysobracteon*) *stenoderum* (BATES, 1873) ドウイロミズギワゴミムシ

a：北海道・本州・四国・九州；東シベリア.

b：平滝沼 (7. VIII. 1967)，温湯 (26. IX. 1944)，葛川 (12. VIII. 1975).

c：川原・沼岸などの砂地にいて，よく飛ぶ.

57. *Bembidion* (*Cylindrobracteon*) *aeneipes* (BATES, 1883) コホソトビミズギワゴミムシ

a：北海道・本州.

b：温湯 (6. V. 1942).

c：浅瀬石川の川原の砂地にいる.

58. *Bembidion* (*Neoemphanes*) *shimoyamai* HABU, 1978 シモヤマミズギワゴミムシ

a：本州.

b：十二湖 (21. VI. 1964)，追良瀬川 (10. VIII. 1973)．

c：追良瀬川では堰堤に引っかかっていた朽木の大木から出てきたが，1頭より見なかった．

59. ***Asaphidion semilucidum*** (Motschulsky, 1862) メダカチビカワゴミムシ

a：北海道・本州・四国・九州；樺太・アムール．

b：柏木 (8. XI. 1976)，沖館 (12. II. 1972)，新屋 (15. VI. 1973)，温湯 (10. V. 1942)，葛川 (16. VII. 1960)．

c：畑地・宅地などの湿ったところにいる．山地では樹の根本を這っているのが見られる．

60. ***Patrobus*** (***Patrobus***) ***flavipes*** Motschulsky, 1864 キアシヌレチゴミムシ

a：北海道・本州・四国・九州；支那．

b：馬場尻 (13. IX. 1946)．

c：畑地にいる．

61. ***Diplous depressus*** (Gebler, 1829) ヒメカワチゴミムシ

a：北海道・本州・四国；朝鮮・シベリア．

b：白神岳 (21. VI. 1971)，追良瀬川 (15. VI. 1973)，温湯 (18. XI. 1941)，葛川 (6. VII. 1947)，温川 (18. X. 1954)．

c：川原の石下に多い．

62. ***Diplous caligatus*** Bates, 1873 カワチゴミムシ

a：北海道・本州・四国・九州．

b：温湯 (18. XI. 1941)，葛川 (10. X. 1954)，温川 (18. X. 1954)．

f. *atratus* Habu, 1951

b：追良瀬川 (15. VI. 1973)．

c：川原の石下にいる．追良瀬川では羽化したばかりの翅の柔かい，色の淡いものも見られた．

63. ***Oxyglychus laeviventris*** (Bates, 1883) ツヤムネナガゴミムシ

a：本州・四国．

b：十二湖 (16. VIII. 1965)，新屋 (14. IV. 1940)，蛭貝沢 (11. IV. 1947)，葛川 (11. VI. 1950)，十和田 (7. VI. 1956)．

c：朽木の中から出てくる．

64. ***Lesticus*** (***Triplogenius***) ***magnus*** (Motschulsky, 1860) オオゴミムシ

a：北海道・本州・四国・九州；朝鮮・支那．

b：深浦 (12. VI. 1975)，黒滝 (7. VI. 1939)，田面木，根城，笹子 (18. VIII. 1963)．

c：畑地の朽木や石の下にいる．

65. *Myas cuprescens* (MOTSCHULSKY, 1857) オオマルナガゴミムシ

a：本州・四国・九州.

b：大木平 (8. VI. 1948)，温川 (21. IX. 1974)，十和田 (4. VII. 1948；22. VIII. 1954；1. IX. 1957).

c：青森県では少ない種で，林中から1頭ずつ見つかった.

66. *Stomis prognathus* BATES, 1883 キバナガゴミムシ

a：本州.

b：温湯 (5. XI. 1941)，大川原 (25. X. 1942)，赤滝 (6. VII. 1947)，青荷 (4. VI. 1942；7. VII. 1942)，大木平 (8. VI. 1948)，十和田 (15. X. 1972).

c：温湯のものは全体が赤褐色で羽化して間もない個体であった．大川原では杉の切株の皮下に入っていた．青荷では岩の間から出てきた.

67. *Poecilus* (*Poecilus*) *caerulescens encopoleus* SOLSKY, 1873 キンナガゴミムシ

a：北海道・本州・四国・九州；朝鮮・シベリア.

b：馬場尻 (13. IX. 1946).

c：畑地や草地などにいる.

68. *Poecilus* (*Poecilus*) *fortipes* CHAUDOIR, 1850 オオキンナガゴミムシ

a：北海道・本州.

b：深浦 (20. X. 1976)，青鹿山 (10. VIII. 1974)，十二湖 (16. VIII. 1965)，追良瀬川 (10. VIII. 1973)，酸ケ湯 (11. VII. 1964)，櫛ケ峯 (12. VIII. 1964)，青荷 (7. VII. 1942)，葛川 (25. VII. 1950)，十和田 (13. VIII. 1962).

c：山地の道路わきの草の中に多い.

69. *Allotriopus hoplites* BATES, 1883 クリイロナガゴミムシ

a：本州・九州.

b：蛭貝沢 (24. V. 1942；10. VI. 1947).

c：朽木・倒木の中から見つかる.

70. *Pterostichus* (*Lagarus*) *sulcitarsis* MORAWITZ, 1862 アシミゾナガゴミムシ

a：北海道・本州；朝鮮・東シベリア.

b：温湯 (18. XI. 1941)，葛川 (18. VI. 1958).

c：温湯では川原にある朽木の中にいた.

71. *Pterostichus* (*Eolagarus*) *dulcis* (BATES, 1883) ツノアカナガゴミムシ

a：本州.

b：平滝沼 (8. VIII. 1967).

c：平滝沼のほとりにかけたトラップに入った.

72. *Pterostichus* (*Argutor*) *longinquus* BATES, 1873 コホソナガゴミムシ

a：本州・九州.

b：櫛ケ峯 (12. VII. 1964).

c：山頂近くの湿地から見つかった.

73. *Pterostichus* (*Bothriopterus*) *subovatus* (MOTSCHULSKY, 1860) マルガタナガゴミムシ

a：北海道・本州；朝鮮・満洲・東シベリア.

b：十二湖 (16. VIII. 1965), 蛭貝沢 (24. V. 1942), 赤滝 (6. VII. 1947), 青荷 (4. VI. 1943), 葛川 (7. XI. 1954), 十和田 (2. IX. 1956).

c：石下などに多い.

74. *Pterostichus* (*Bothriopterus*) *adstrictus* ESCHSCHOLTZ, 1823 エゾマルガタナガゴミムシ

a：北海道・本州；シベリア・北欧・北米・アイスランド.

b：八甲田 (24. IX. 1975).

c：八甲田井戸岳 (1550 m) 山頂の石下から得られたという. (昆虫と自然, 12 (1), 1977, 沢田博史採集, 中根猛彦博士同定).

75. *Pterostichus* (*Eurythoracana*) *haptoderoides japanensis* (LUTSHNIK, 1922) トックリナガゴミムシ

a：北海道・本州・四国・九州.

b：馬場尻 (13. IX. 1946).

c：畑地から採れた.

76. *Pterostichus* (*Rhagadus*) *microcephalus* (MOTSCHULSKY, 1860) コガシラナガゴミムシ

a：北海道・本州・四国・九州.

b：十二湖 (16. VIII. 1965), 温湯 (18. XI. 1941), 青荷 (18. VIII. 1947), 葛川 (29. V. 1957), 温川 (23. IX. 1956), 十和田 (18. VI. 1947).

c：川原の石下や崖下の土中から出てくる.

77. *Pterostichus* (*Rhagadus*) *polygenus* BATES, 1883 ニッコウヒメナガゴミムシ

a：本州.

b：温湯 (16. IV. 1942), 蛭貝沢 (24. V. 1942), 赤滝 (6. VII. 1947), 青荷 (18. VIII. 1947), 十和田 (18. VI. 1947).

c：川原・湖畔の石下や道路わきの土中に見られる.

78. *Pterostichus* (*Platysma*) *leptis* Bates, 1883 クロオオナガゴミムシ

a：北海道・本州.

b：蛭貝沢（12. VII. 1942），沖浦（11. VI. 1972），葛川（18. X. 1954），温川（12. VI. 1948），十和田（15. VIII. 1946）.

c：はじめて蛭貝沢の川原の石下から見つけ，その後葛川・温川・十和田湖畔などの深山地帯からばかり発見された．近年になって沖浦の川原にも産することが知れた.

79. *Pterostichus* (*Melanius*) *chujoiellus* Jedlička, 1962 エグリナガゴミムシ

a：本州.

b：蛭貝沢（10. VI. 1947），善光寺平（15. VII. 1970）.

c：蛭貝沢から見つけた種で，善光寺平からも採れた.

80. *Pterostichus* (*Eosteropus*) *prolongatus* Morawitz, 1862 オオクロナガゴミムシ

a：北海道・本州・九州；東シベリア・支那.

b：大川原（17. X. 1941），蛭貝沢（11. VI. 1947），葛川（3. XI. 1958），大木平（7. XI. 1954），温川（3. XI. 1954），十和田（10. VI. 1949）.

c：大川原では朽木に越冬中のものを得た.

81. *Pterostichus* (*Eosteropus*) *fuligineus* Morawitz, 1862 ニセナガゴミムシ

a：北海道・本州.

b：小泊（26. V. 1974），青鹿山（9. VIII. 1974），十二湖（16. VIII. 1965），矢捨（6. X. 1970），大川原（5. XI. 1941），温川（22. V. 1955）.

c：矢捨山では朽木の皮下に入っていた．川原の石下に見られる.

82. *Pterostichus* (*Paralianoe*) *macrogenys macrogenys* Bates, 1883 ニッコウオオズナガゴミムシ

a：本州.

b：蛭貝沢（13. VIII. 1947），赤滝（16. V. 1943），青荷（4. VI. 1942），温川（12. VI. 1948）.

c：崖下の土中に棲息しているのが見られる.

83. *Pterostichns* (*Nialoe*) *mirificus* Bates, 1883 シリトゲナガゴミムシ

a：本州（中部以北）.

b：青鹿山（9. VIII. 1974），追良瀬川（10. VIII. 1973），新屋（11. VII. 1972），大川原（16. IX. 1942），蛭貝沢（24. V. 1942），青荷（18. VIII. 1947），温川（12. VI. 1948），十和田（16. VIII. 1946）.

c：山地の谷間の湿っているようなところに産する.

84. *Pterostichus yoritomus* Bates, 1873 ヨリトモナガゴミムシ

a：本州・四国・九州.

b：青荷（12. V. 1942），弥勒滝（24. VIII. 1973）.

c：青荷では道路わきの崖状になったところにいる.

85. *Pterostichus habui* Jedlička, 1962

a：本州.

b：冬部沢（19. VIII. 1974），十二湖（16. VIII. 1965），岩木山（5. VIII. 1962），蛭貝沢（10. VI. 1947），櫛ケ峯（12. VII. 1964），青荷（4. VI. 1942），十和田（4. VIII. 1959）.

c：十和田（12. VII. 1962）ではブナの朽木の根元に生えたアミヒラタケに来ていた.

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